148

GOLD COAST COLONY.

7 JAN. 1936

REPORT

ON THE

Medical Department

FOR THE YEAR

1934.

GOLD COAST:

Printed by the Government Printer at the Government Printing Dept., Accra.
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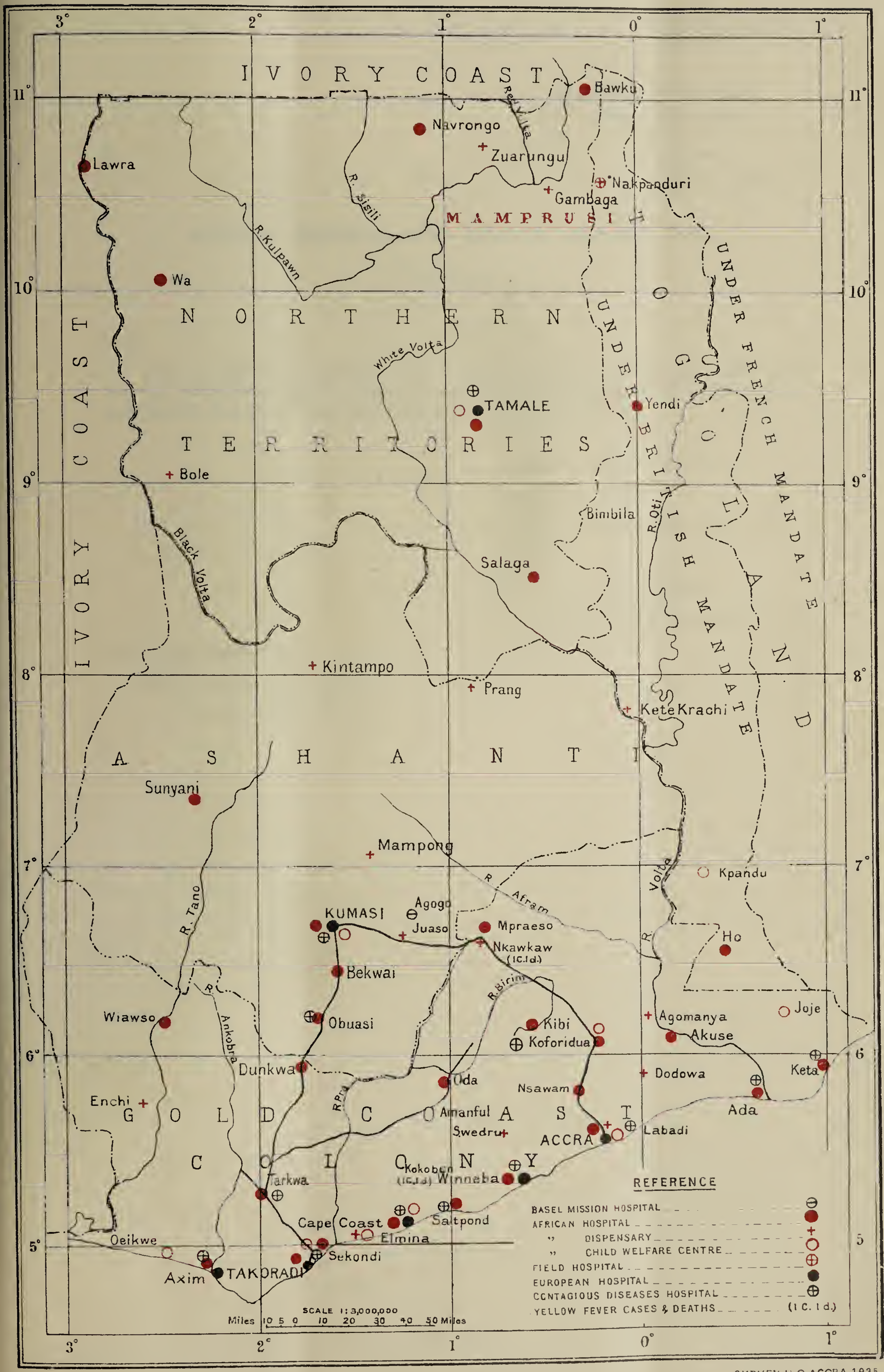
THE GOLD COAST MEDICAL FACILITIES MAP.



SURVEY H.Q.ACCRA,1935.

7 JAN.

No. 141/34/111.

Medical Department,
P.O. Box 138,
Accra,
25th *May*, 1935.

ANNUAL MEDICAL AND HEALTH REPORT, 1934.

Sir,

I have the honour to submit for the information of His Excellency the Governor, and for transmission to the Right Honourable the Secretary of State, the Medical and Health Report of the Gold Coast Colony for the year, 1934.

I have the honour to be,
Sir,
Your obedient Servant,

D. DUFF,
Director of Medical Services.

The Honourable
The Colonial Secretary,
Victoriaborg, Accra.

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PREFACE.

The present report covers the year 1934, and overlaps the last three months of the report for 1933–34. The latter report is so full, and so little of note has occurred in the interval, that it is not intended in the present report to do more than to extend it and to bring it up to the end of the calendar year 1934. This report should therefore be read in conjunction with that for 1933–34.

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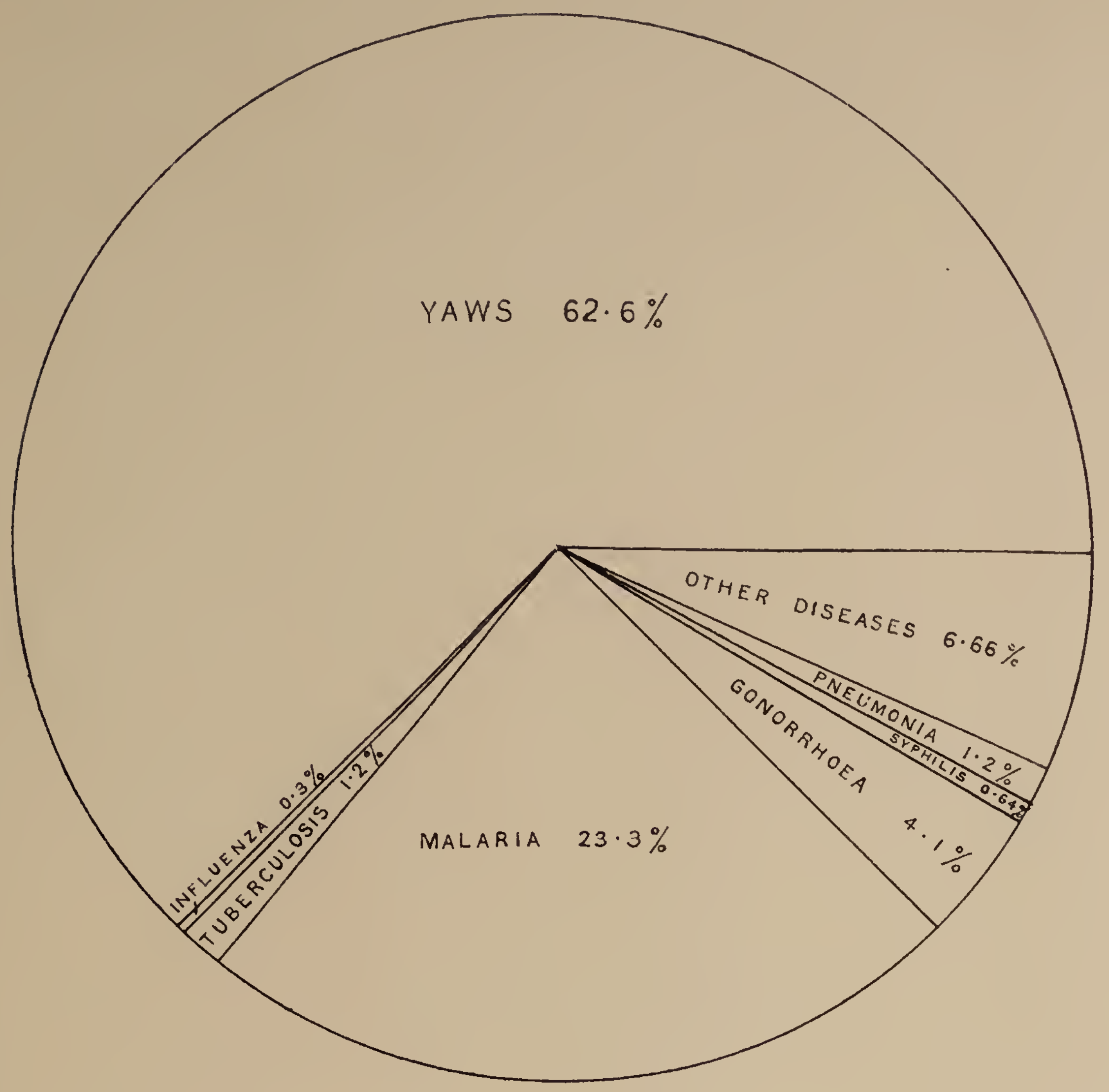
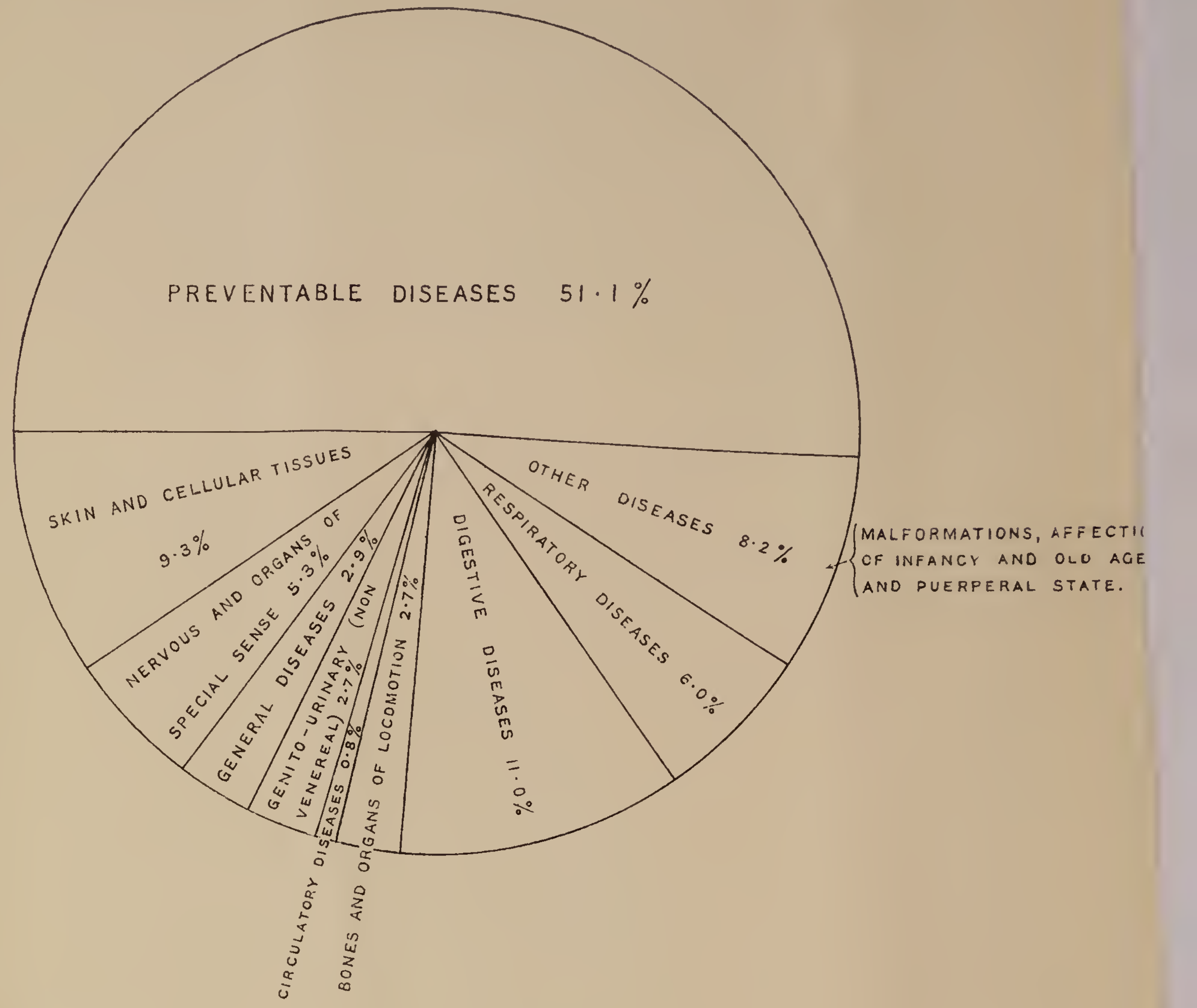
INFECTIVE DISEASES TOTAL INCIDENCE 105,124.

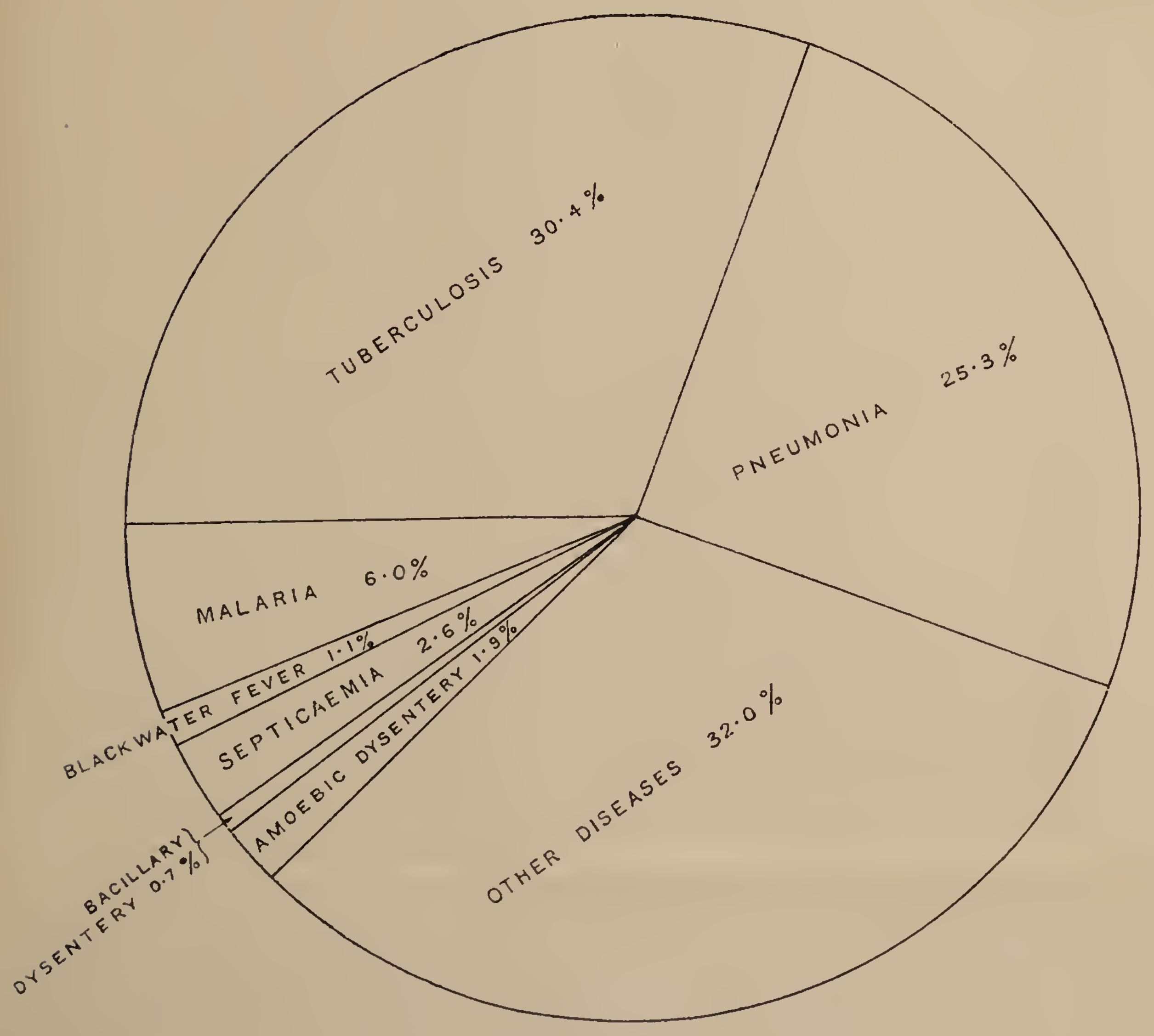


GENERAL SYSTEMIC AND PREVENTABLE DISEASES TOTAL INCIDENCE 255,802.

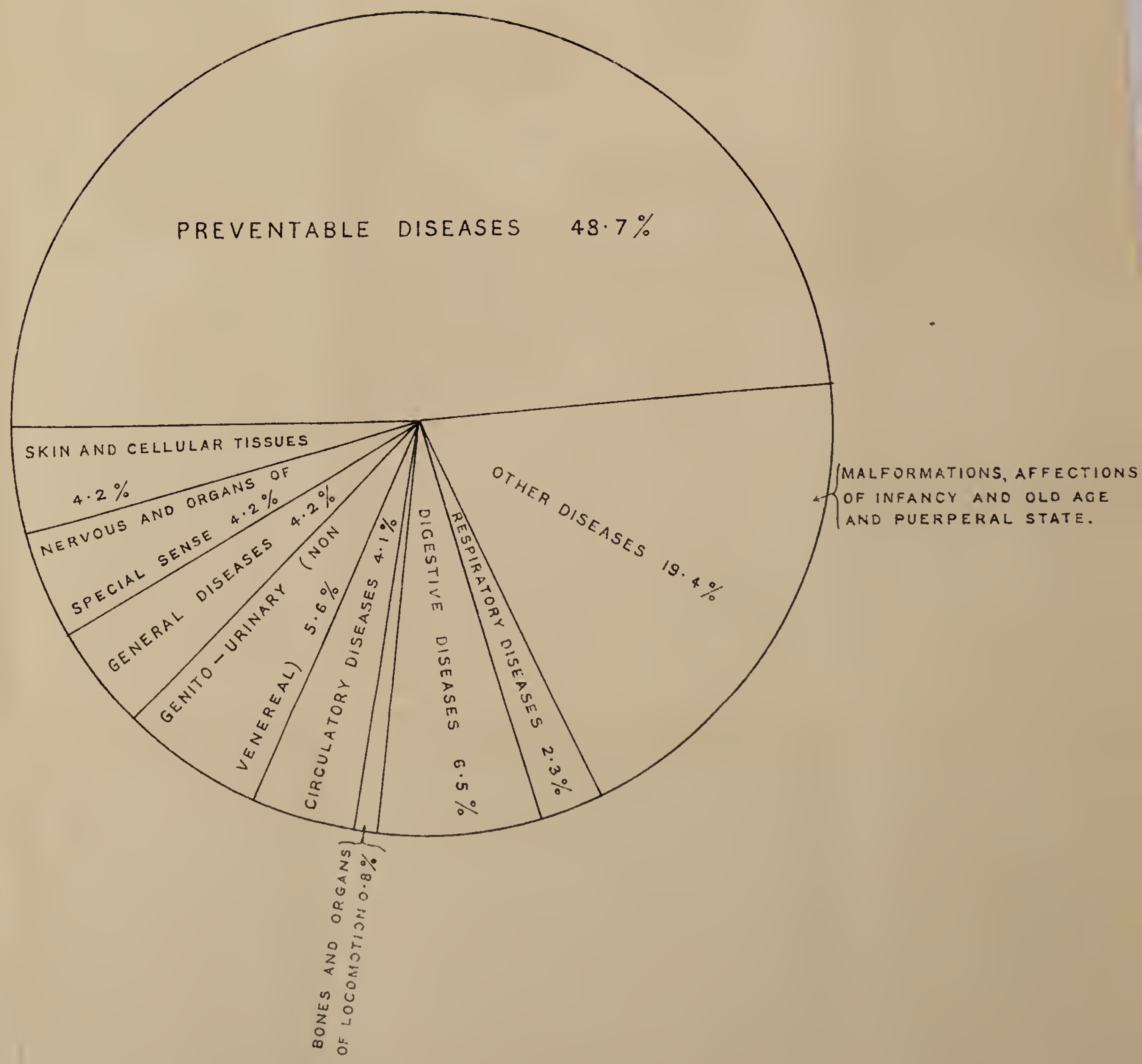


PREVENTABLE DISEASES ARE

(1) INFECTIOUS DISEASES
(2) INTOXICATION AND POISONS
(3) SCABIES AND TINEAE
(4) HELMINTHS
(5) AFFECTIONS PRODUCED BY EXTERNAL CAUSES.



TOTAL DEATHS = 678 = ·64% OF TOTAL INCIDENCE.



TOTAL DEATHS = 1668 = ·65% OF TOTAL INCIDENCE.

SURVEY H.Q. ACCRA, 1935.

Annual Medical and Health Report for the Year 1934.

I.—ADMINISTRATION.

(a) Staff—Medical, Health and Laboratory Branches.

(*a*) MEDICAL BRANCH.

European Staff.

Appointments :—

Dr. J. W. Denoon ; Dr. F. J. Sladen ; Dr. G. Watt ; Dr. H. C. Armstrong ; Miss E. M. Simmons ; Miss C. L. Lucas ; Miss J. H. Marr and Miss C. Flett.

Transfers :—

Dr. M. K. Lawlor, Woman Medical Officer, from Health Branch to Medical Branch ; Miss G. M. Spencer, Nursing Sister, to Sierra Leone as Senior Nursing Sister.

Retirements :—

Dr. J. H. Owen-Flood ; Dr. L. D'A. Quigley ; Miss D. A. Callaway, Nursing Sister ; Miss E. M. Barnes, Nursing Sister.

African Staff.

Promotions :—

Mr. T. E. Hyde, Office Assistant and Accountant ;

1st Division Dispensers	3
Assistant Attendant	1

Appointments :—

Mr. B. Y. Quarshie, Office Assistant and Accountant, Medical Department, on transfer from the Public Works Department.

2nd Division Dispenser	1	(re-appointment)
,, ,, Nurses	11	
Mental Nurses	4	
Nurses-in-training	30	
Dispensers-in-training	2	(re-appointment)
Midwives-in-training	5	

Retirements :—

Office Assistant and Accountant	1	(death)
2nd Division Clerks	1	(death)
1st Division Dispensers	3	
1st Division Nurse	1	
2nd Division Nurses	2	
Nurses-in-Training	6	
Midwives-in-Training	3	
Mental Nurses	3	(1 death)

(*b*) HEALTH BRANCH.

European Staff.

Appointments :—

Sanitary Superintendents—Messrs. J. O. Drinkald, R. B. Fyfe and A. E. Sherwood.

Reappointments :—

Sanitary Superintendent—Mr. W. J. Cooke.

AFRICAN STAFF.

Appointments :—

Sanitary Inspectors-in-Training—Fourteen officers.

Promotions :—

Senior Division Sanitary Inspector—Mr. J. S. Abbey.
First Division Sanitary Inspectors—Messrs. J. Kobbina and J. O. Gerber.

Retirements :—

Senior Division Sanitary Inspector—Mr. A. Quao Thompson.
First Division Sanitary Inspector—Mr. H. A. Boateng.
Second Division Sanitary Inspector—Mr. J. R. Mullings.
Assistant Public Vaccinator—Mr. J. H. Addoo.

(*c*) LABORATORY BRANCH.

Reappointments :—

Mr. E. E. Bannerman, Laboratory Attendant.

(b) Ordinances affecting Public Health.

2. The following represent the more important public health enactments during the year arranged in order of comparative importance :—

(1) Regulations No. 32 of 1934 amending the Mining Health Areas Regulations.

(2) Orders by the Governor applying the Mining Health Areas Ordinance to Takorowasi, Takroasi, Wenchi, Bibiani, Consolidated African Selection Trust, Cayco, Obuom and Attunsu.

(3) Order in Council No. 14 of 1934 applying the Mosquitoes Ordinance to all Mining Health Areas.

(4) Order by the Chief Commissioner No. 13 of 1934 under the Ashanti Administration Ordinance applying rules (health) to the towns of Obuom, Odumasi, Bechem, Berekum, Chira, Chawiase, Jinjini, Kukuom, Mim, Nchira, Nkwanta, Pamu, Suatre, Teppa, Techimentia, Wamanfo, Wamfie and Weila.

(5) Ashanti Order by Governor No. 3 of 1934 under the Mosquitoes Ordinance applying its provisions to Konongo and Odumasi in Ashanti.

(6) Order by the Governor No. 3 of 1934 under the Vaccination Ordinance making vaccination compulsory within the limits of the Northern Territories of the Gold Coast and the Northern Section of Togoland under British Mandate.

(7) Orders by the Governor Nos. 1 and 4 of 1934 declaring Ho, Togoland, an infected place owing to an outbreak of small-pox and revoking the declaration at the end of the epidemic.

(8) Order in Council No. 12 of 1924 under the Towns Ordinance applying its provisions to Bogosu in the Tarkwa District.

(9) Regulations No. 27 of 1934 embodying market rules for Dunkwa.

(10) Regulations No. 2 of 1934 embodying rules for the slaughter-house at Cape Coast.

(11) Order No. 20 of 1934 prohibiting the straying of sheep and goats in the town of Kibi.

(12) Bye-Law No. 1 of 1934 by the Sekondi Town Council prohibiting the presence of cattle within certain areas of Sekondi.

(c) Finance.

3. The total revenue earned by the Medical Department (all branches) during the year 1934 amounted to £42,444, as compared with £34,319 in 1933/34.

4. The total Ordinary (i.e. Recurrent) Expenditure for the Colony was £2,334,844.

5. The total Ordinary (i.e. Recurrent) Expenditure for medical services (all branches) was £282,258 as compared with £278,124 in 1933/34. This figure is exclusive of the cost of buildings, e.g. hospitals, dispensaries, etc., and other public health works such as water supplies, town improvements, etc.

6. The ratio of the Ordinary Expenditure on Medical Services to the Total Expenditure of the Colony was 12·09 per cent as compared with a ratio of 12·08 per cent last year.

7. A detailed Financial Statement for the year appears at Return B of the Returns.

8. The following table shows the Ordinary (Recurrent) Expenditure under the Heads Medical, Health and Research over five years, as compared with the total Ordinary (Recurrent) Expenditure for the Colony.

TABLE I.

Branch.	1930–31 (Actual).	1931–32 (Actual).	1932–33 (Actual).	1933–34 (Actual).	1934–35 (Actual).	1935–36 (Estimated).
	£	£	£	£	£	£
Medical	195,450	166,572	155,248	155,199	159,414	169,511
Health	154,986	139,083	121,714	116,484	115,781	122,177
Research	18,647	14,489	8,148	6,441	7,063	7,122
Total	369,083	320 144	285,110	278,124	282,258	298,810
Total Colony ...	2,872,385	2,700,469	2,647,486	2,302,061	2,334,844	2,348,412
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Percentage of total to Colony total	12·84	11·85	10·76	12·08	12·09	12·72

II.—PUBLIC HEALTH.

(b) General Remarks.

I.—HISTORICAL SURVEY.

9. In the report for 1933–34 a historical survey of the work of this department from 1913 to 1933 was included. The following note will bring this survey up to date :—

1933–34.

No serious epidemic.

Seven sporadic cases of yellow fever. Four Europeans (all fatal). Three Africans (all recovered).

A small outbreak of smallpox in the Ho District of British Mandated Togoland.

Introduction of a pipe-borne water supply to Kumasi ; opened in March 1934.

Continued influx of Europeans to the gold-mining areas.

Steady advance in the gold and diamond mining areas along general sanitary lines.

New hospital for Keta—plans approved.

II.—FACTORS AFFECTING PUBLIC HEALTH DURING 1934.

10. The factors detailed in the previous report continued and no marked change occurred. The period was rather one of consolidating ground already gained and of considering plans for further advance when the financial situation had sufficiently improved.

11. *Yaws.*—(65,803 cases) accounted for 25·7 per cent of all cases treated.

12. *Malaria.*—maintained its high position in the list of diseases, constituting 96 per 1000 of all cases treated ; it ranges around 10 per cent of all cases treated from year to year.

TABLE II.

MALARIA.

	1931–32	1932–33	1933–34	1934.
Total treated	30,062	20,340	25,584	24,554
Ratio per 1,000 of all cases treated	116	85	102	96

13. *Blackwater Fever.*—A comparison between the figures for 1933–34 and 1934 is shown below :—

	1933–34.			1934.		
	Total Resident.	Cases.	Deaths.	Total Resident.	Cases.	Deaths.
Europeans	3,145	8	4	3,491	6	3
Syrians	—	3	1	—	4	3
East Indians	—	—	—	—	2	1
Africans	—	7	3	—	12	5
Total ...	3,145	18	8	3,491	24	12

14. The case incidence and case mortality of dysentery and pneumonia in Government institutions may be seen from the following tables :—

TABLE III.

DYSENTERY.

	1931–32.	1932–33.	1933–34.	1934.
Case incidence (per 1,000 of all cases treated).	6·2	5·9	5·7	4·6
Case mortality (per 100 in-patients). ...	14·2	11·3	9·6	10·1

TABLE IV.

PNEUMONIA.

	1931–32.	1932–33.	1933–34.	1934.
Case incidence (per 1,000 of all cases treated).	8·3	5·0	5·7	4·9
Case mortality (per 100 in-patients). ...	33·1	35·7	29·7	30·1

TUBERCULOSIS.

15. The following five-year table records the incidence and case mortality of tuberculosis (all forms) treated in the hospitals and dispensaries of the Colony :—

TABLE V.

	Cases treated.	Incidence. (per 1,000 of all cases treated).	Case mortality (per 100 in-patients.)
1930–31	1,300	4·8	40
1931–32	1,340	5·2	37
1932–33	1,227	5·1	37·5
1933–34	1,193	4·7	40·2
1934	1,269	4·9	42·5

16. Although case mortality is high (and in all probability definitely higher than shown owing to the fact that many victims of the pulmonary form find their way back to their villages to die), yet it is to be noted that the case incidence does not seem to vary much from year to year.

17. The increase in gold-mining activities with its known close association with phthisis is bound to bring this special problem into greater prominence on the Gold Coast as time goes on.

18. At the moment it is engaging close attention (*vide* the Hygiene and General Sanitation section of this report, paragraphs 87, 137, 147 and 151, etc.).

TRYPANOSOMIASIS.

19. In Appendix IX of the report for 1933–34 (pages 100–107) the position up to the end of March 1934 was reviewed at some length.

20. The table furnished at page 101 thereof is brought up to date in the table below :—

	Cases.	Deaths.	Incidence per 10,000 of all cases treated (Medical Branch).
1924–25	26	—	3·2
1925–26	37	5	3·8
1926–27	67	11	6·4
1927–28	59	4	4·4
1928–29	94	18	5·3
1929–30	121	23	6·6
1930–31	224	16	10·5
1931–32	250	28	12·6
1932–33	685	45	33·1
1933–34	1,179	77	56·1
1934	1,973	112	91·3

21. The cases for 1933–34 and 1934 may be divided as follows :—

	Total.	In-patients.	Out-patients.	Ashanti.	Northern Territories.	Colony.
1933–34 ...	1,179	734	445	469	618	92
1934	1,973	1,449	524	370	1,498	105

(In 1933–34 no European cases occurred ; in 1934 there were seven).

22. The increase of 787 cases treated, which would appear remarkable, is accounted for by the figures from the treatment camp at Nakpanduri where they have leaped from 240 to 1,012.

23. The stations at which the greatest number of cases were seen were as follows :—

Nakpanduri	1,012
Kumasi	252
Lawra	150
Bawku	96
Sunyani	96
Tamale	90
Wa	77

24. The camp at Nakpanduri is well situated and the accommodation satisfactory. Its popularity is steadily increasing and the convalescing patients are very contented.

25. This camp is made a centre for investigating the incidence of the disease in the surrounding infected territory. This area contains a population of some 15,000 people. Fifty-eight villages were visited and over 6,200 people examined. Over 5 per cent of these were found infected. Allowing for errors, an infection rate of, say, 7 per cent at least may be estimated for this area. For the purpose of control reliance is being placed on intensive treatment and on planned clearings, but mainly on clearings. The latest reports show that the clearings in the Kusasi

and M'boaba areas were satisfactory especially in the M'boaba area. All the previous clearings have been kept up and even extended. Results have not been quite so satisfactory in the Mamprussi area proper (Gambaga–Sakko and Lanwingo–Nasia–Wulugu).

26. A small outbreak was reported towards the end of 1934 from the village of Kwale in the Tumu section of the Lawra area, where the forest for some miles round is thicker than is usual in this district, and the patch which fringes the local stream is, according to Dr. Saunders, medical officer, unique and very similar to the bush at Ejura in Ashanti. It is 400–600 yards broad counting both sides of the stream. The whole available population of 126 was examined and 59 cases (47 per cent) were found infected. An intensive tryparsamide and " Bayer 205 " treatment campaign began combined with the clearing of the bush over a large area of the fringing forest. Although the moving of an infected village for sleeping sickness has been a usual step in the Lawra half of the district the inhabitants of Kwale were loth to be moved and it was judged better not to do so as if they were moved against their will any further local outbreaks would probably not be reported.

27. The recommendations contained in Appendix IX of last year's report are being carried out as far as possible. It has been further recommended that a political officer should be detached to work in co-operation with this department on special sleeping sickness duties in connection with clearings. The clearings being carried out are on the aggressive and defensive lines recommended by Dr. T. A. M. Nash, Entomologist to the Tsetse Investigation of Northern Nigeria. It is hoped that he will be able to visit the Gold Coast during the coming year in order to advise.

28. The danger of the spread of trypanosomiasis in and from the Northern Territories is recognised but it is believed that extension of our present methods will control spread.

29. With regard to the forest zone itself an imminent danger has been pointed out by Dr. Morris, Entomologist, in his paper : " On the bionomics and the importance of *G. longipalpis*, Wied. in the Gold Coast " (*Bulletin of Entomological Research*, Vol. XXV, Part 3, September, 1934).

30. In this article he records his investigations and concludes that *G. longipalpis* is probably second to *G. palpalis* in the distribution of sleeping sickness in the Gold Coast. It is known that the forest of the Gold Coast is receding from both the north and the south. This retreat, due principally to the practice of shifting cultivation, assisted in the central parts of the forest zone by the extensive clearings made by the mining community, induces a secondary type of scrub very difficult to deal with but eminently suited to colonization by *G. longipalpis*.

31. Dr. Morris asserts that an improved system of native farming should be the basis of all attempts to control *G. longipalpis*. Such a system would not only ward off the danger from this fly but would at the same time be the means of improving the food value of the farmers' crops and thus of raising the general standard of health of the people.

(b) Vital Statistics.

I.—GENERAL NATIVE POPULATION.

32. As compared with previous years the general health of the African community has not been unsatisfactory. Medical officers have been unanimous on this point in their reports. The invaliding and death-rate figures for African officials certainly bear this out, although the figure for the number of deaths per thousand of patients treated in hospitals, dispensaries, etc., remained the same as in 1933–34. It is very gratifying to note that no serious or widespread epidemic took place during the year.

33. This satisfactory record must, at least in part, be due to the efforts of the officers of this department in all its branches. The records of the hospitals and dispensaries show an increase over the previous year of nearly 2 per cent in the total number of in- and out-patients treated, whilst the number of house to house visits carried out by the inspectorate of the Health branch rose from 1,590,647 in 1932 and 1,735,501 in 1933 to 1,929,507 in 1934. Such work cannot have been without its effect.

34. At the same time, as elsewhere in Africa, the general health of the nativ is greatly lowered by the constant toll of such disease as malaria, yaws, dysentery, etc., especially amongst the infant population. This can only be combated by the gradual advance of education, increase in social services, etc., and these factors in turn ultimately depend on the economic conditions prevailing.

35. Although mortality and morbidity from deficiency diseases do not figure to any great extent in the returns, and the majority of the inhabitants appear sufficiently nourished, yet reports from medical officers in many areas point to deficiency and monotony in diet as a factor lowering health and resistance to disease, children being the chief sufferers.

36. So much attention has been devoted to the cocoa and mining industries that the fact that the majority of the inhabitants are simple village farmers living chiefly on the food produced on their own farms is apt to be overlooked. The need therefore to conserve forests and to improve on the present wasteful system of shifting cultivation by the education of the farmer in intensive methods, and in the relative food values of his food-crops is one which cannot but strike the observer.

37. The need for an improved system of native farming is also of the greatest importance for the control of a most dangerous tsetse-fly of the forest zone, *Glossina longipalpis*. The menace from this fly owing to deforestation has been referred to under "Trypanosomiasis" above.

38. In this connection the remarks at page 20 and elsewhere of the Medical and Sanitary report of the Protectorate of Nyasaland for 1933 are warmly endorsed.

39. It will be noted that during 1931/32/33 a decrease took place in the total numbers treated. This decrease corresponded with the world financial crisis and the increase during 1934 is probably a reflection of the gradual return to more prosperous conditions.

II.—GENERAL EUROPEAN POPULATION.

40. The European population increased by 346. This is chiefly due to the steady increase in the mining community.

41. Table VI gives details of the actual number of European residents.

TABLE VI.

NUMBERS RESIDENT.

	1932–33.	1933–34.	1934.
(i) Government official	941	857	847
(ii) Employees of trading firms	1,310	1,359	1,411
(iii) Employees of mining companies	450	682	952
(iv) Missionaries	258	247	281
Total	2,959	3,145	3,491

III.—EUROPEAN OFFICIALS.

42. The improvement in health referred to above is shown in the following tables :—

TABLE VII.

SICK, INVALIDING AND DEATH-RATES.

	1932–33.	1933–34.	1934.
Total number of officials resident	941	857	847
Average number resident	639	617	599
Total number on the sick list	529	519	533
Total number of days on sick list	5,183	4,813	4,918
Average daily number on sick list	14·2	13·2	13·5
Percentage of sick to average number resident ...	2·2	2·1	2·2
Average number of days on sick list for each patient	9·8	9·3	9.2
Average sick time to each resident	8·1	7·8	8·2
Total number invalided...	36	42	29
Percentage of invalidings to total residents	3·9	4·9	3·4
Percentage of invalidings to average number resident	5·6	6·8	4·8
Total deaths	1	3	2
Percentage of deaths to total residents	0·1	0·4	0·2
Percentage of deaths to average number of residents	0·2	0·5	0·3

TABLE VIII.

Loss of Time from Sickness.

Year.	Average No. resident.	Total sick days.	Total days on sick list for malaria.	Total days on sick list for other diseases.	Percentage of days lost through malaria to total days lost.	No. of days lost through malaria for the year per 100 residents.
1925–26 ...	761	6,108	1,547	4,561	25·3	203
1926–27 ...	783	6,847	1,204	5,643	17·6	153
1927–28 ...	835	7,023	1,530	5,493	21·8	183
1928–29 ...	881	7,177	1,661	5,516	23·1	188
1929–30 ...	972	7,795	1,920	5,875	24·6	197
1930–31 ...	936	7,961	1,610	6,351	20·2	172
1931–32 ...	819	6,755	1,381	5,374	20·4	168
1932–33 ...	639	5,183	1,056	4,127	20·4	165
1933–34 ...	617	4,813	922	3,891	19·1	149
1934	599	4,918	1,160	3,758	23·6	193

TABLE IX.

Invaliding according to Economic Group.

	Maximum Salary not less than £600 per Annum.			Maximum Salary less than £600 per Annum.		
Year.	Average number resident.	Invaliding.	Rate per 1,000.	Average number resident.	Invaliding.	Rate per 1,000.
1931–32 ...	598	32	53·5	221	26	117·6
1932–33 ...	471	27	57·3	168	9	53·5
1933–34 ...	463	27	58·3	154	15	97·4
1934	457	21	45·9	142	8	56·3

TABLE X.

Deaths according to Economic Group.

	Maximum Salary not less than £600 per Annum.			Maximum Salary less than £600 per Annum.		
Year.	Average number resident.	Deaths.	Death rate per 1,000.	Average number resident.	Deaths.	Death-rate per 1,000.
1931–32 ...	598	2	3·4	221	5	22·6
1932–33 ...	471	—	—	168	1	6·0
1933–34 ...	463	2	4·3	154	1	6·5
1934	457	1	2·2	142	1	7·0

TABLE XI.

Invaliding and Death-rates.

Year.	Average number resident.	Total invalided.	Percentage invalided.	Total died.	Death-rate per 1,000.
1925–26	761	59	7·8	8	10·5
1926–27	783	49	6·3	3	3·8
1927–28	835	39	4·7	6	7·1
1928–29	881	50	5·7	4	4·5
1929–30	972	49	5·0	5	5·1
1930–31	936	49	5·2	3	3·2
1931–32	819	58	7·1	7	8·5
1932–33	639	36	5·6	1	1·5
1933–34	617	42	6·8	3	4·8
1934	599	29	4·8	2	3·3
Average for the period ...	784·2	46·0	5·9	4·2	5·2

TABLE XII.

INVALIDINGS ACCORDING TO SERVICE AND LEAVE CONDITIONS.

Serving under	Under 6 months.	6 but under 9.	9 but under 12.	12 but under 15.	15 but under 18.	18 months and over.	Total.
Old Leave Regulations	1	—	1	—	—	—	2
New Leave Regulations	2	4	4	5	9	3	27

TABLE XIII.

CAUSES OF INVALIDINGS OF EUROPEAN OFFICIALS DURING THE PERIOD 1934.

Alcoholism (?)	1	Jaundice	1
Neuritis	1	Antrum disease	1
Polyneuritis	1	Hysteria	1
Chronic bronchitis	1	Neurasthenia	1
Diabetes	1	Malarial cachexia	1
Trypanosomiasis	2	Malaria (malignant)	4
Renal colic	1	Chronic fibrositis	1
Biliary calculus	1	Local injuries	1
Spondylitis	1	Pharyngitis	1
Cholecystitis	1	Suspected tuberculosis	1
Asthenia	3	Epithelioma	1
Dementia	1		

Total 29.

(One official died of cardiac syncope, and one was killed in a motor accident.)

IV.—EUROPEAN NON-OFFICIALS.

43. The return for 1934 shows a slight improvement over that for 1933–34.

TABLE XIV.

1932–33.		Number.	Deaths.	Invalided.	Death-rate per thousand.	Invaliding-rate per thousand.
Merchants	Males	903	3	14	3·3	15·5
	Females	407	—	3	—	7·4
Mining Companies	Males	428	3	9	7·0	21·0
	Females	22	—	—	—	—
Missionaries	Males	155	1	7	6·4	45·2
	Females	103	2	2	19·4	19·4
Totals and averages ...		2,018	9	35	4·4	17·3
1933–34.						
Merchants	Males	885	6	13	6·8	14·7
	Females	474	—	—	—	—
Mining Companies	Males	658	8	22	12·1	33·4
	Females	24	—	—	—	—
Missionaries	Males	146	1	4	6·8	26·7
	Females	101	—	1	—	9·9
Totals and averages ...		2,288	15	40	6·6	17·5
1934.						
Merchants	Males	909	2	6	2·2	6·6
	Females	502	—	6	—	11·9
Mining Companies	Males	928	12	21	12·9	22·6
	Females	24	—	—	—	—
Missionaries	Males	174	1	2	5·7	11·5
	Females	107	—	5	—	46·7
Totals and averages ...		2,644	15	40	5·7	15·1

TABLE XV.

INVALIDINGS.

Neuritis	2	Blackwater fever	1
Malaria (malignant)	3	Tumour (internal)	1
Suspected pulmonary tuberculosis	2	Dysentery	2
Fracture	2	Furunculosis	1
Hepatitis	1	Pyrexia of uncertain origin	1
Septic foot	1	Cystitis	1
Psychoneurosis	2	Pulmonary tuberculosis	3
Neurasthenia	1	Trypanosomiasis	3
Injury	1	Asthenia	3
Nephritis	1	Osteomyelitis	1
Pleurisy	2	Alcoholism	1
Bronchitis	1	Insomnia	1
Hepatic abscess	1	Liver abscess	1

Total 40.

TABLE XVI.

DEATHS.

Addison's disease	1	Cerebral malaria	2
Influenza	1	Miners' phthisis	1
Accidental injuries	3	Mining accident	1
Blackwater fever	3	Myocarditis and malaria	1
Lobar pneumonia	2		

Total 15.

V.—AFRICAN OFFICIALS.

44. The invaliding and the death-rates have improved amongst African officials. The financial depression bore very hardly on this group owing to the family system whereby those in employment are bound to support the unemployed members of their family. The improvement in health is probably consequent on the improved economic conditions of the Colony which have relieved the burden borne by the African official. Detailed particulars are given below.

TABLE XVII.

SICK, INVALIDING AND DEATH-RATES.

	1932–33.	1933–34.	1934.
Total number of officials resident	3,386	3,761*	3,756
Average number resident	3,096	3,538	3,648
Total number on sick list	1,045	1,090	1,058
Total number of days on sick list	12,199	11,262	11,445
Average daily number on sick list	33·4	30·9	31·3
Percentage of sick to average number resident	1·1	0·9	0·8
Average number of days on sick list for each patient	11·7	10·3	10·8
Average sick time to each resident	3·9	3·2	3·1
Total number invalided	34	33	30
Percentage of invalidings to total resident	1·0	0·8	0·8
Percentage of invalidings to average number resident	1·1	0·9	0·8
Total deaths	12	20	12
Percentage of deaths to total residents	0·4	0·5	0·3
Percentage of deaths to average number resident	0·4	0·6	0·3

* Increase due to including railway officials.

TABLE XVIII.

INVALIDINGS.

Defective vision	1	Debility	1
Cardiac hypertrophy	1	Cardiac irregularity	1
Pulmonary tuberculosis	9	Carcinoma of liver	1
Chronic osteitis	1	Myocarditis	2
Spinal caries	1	Chronic pleurisy	1
Arterio-sclerosis	1	Chronic gastritis	1
Lymphatic leucaemia	1	Chronic bronchitis	1
Trypanosomiasis	1	Pyelo-nephritis	1
Mental instability	5		

Total 30.

TABLE XIX.

DEATHS.

Hemiplegia	1	Strangulated hernia	2
Pneumonia	1	Pyelo-nephritis	1
Myocarditis	2	Injuries	1
Nephritis	1	Pulmonary tuberculosis	2
Yellow fever	1		

Total 12.

VI.—VITAL STATISTICS OF THIRTY REGISTRATION DISTRICTS.

TABLE XX.

POPULATION AND RATES OF REGISTRATION DISTRICTS.

	Population.					Births.		Birth-rate.		Deaths.		Death-rate.	
	1921.	1931.			Mid-year 1934.	1933.	1934.	1933.	1934.	1933.	1934.	1933.	1934.
		Males.	Females.	Totals.									
Aboso	—	3,994	2,587	6,581	6,581	90	133	13.7	20·2	190	220	28·9	33·4
Aburi	—	2,034	1,666	3,700	3,700*	109	188	29.5	50·8	86	77	23·2	20·8
Accra and Labadi...	41,124	32,833	27,893	60,726	67,097	2,799	2,827	43.0	42·1	1,476	1,514	22·7	22·6
Ada and Ada Foah	5,907	2,196	2,254	4,450	4,450*	65	173	—	38·9	41	148	—	33·3
Akuse	4,145	1,784	1,874	3,658	3,658*	72	78	19·7	21·3	71	66	19·4	18·0
Axim	3,781	2,367	2,166	4,533	4,777	150	171	31·9	35·8	139	118	29·6	24·7
Bekwai	—	2,085	1,654	3,793	3,793*	294	186	77·5	49·0	79	77	20·8	20·3
Cape Coast	14,921	9,603	8,082	17,685	18,583	562	611	30·7	32·9	353	341	19·3	18·4
Dodowa	1,061	1,145	1,077	2,222	2,599	154	170	62·0	65·4	77	70	31·0	26·9
Dunkwa	2,005	1,826	2,134	3,960	4,595	126	128	28·6	27·9	146	140	33·2	30·5
Elmina	5,262	2,186	2,611	4,797	4,797*	237	208	49·4	43·4	123	122	25·6	25·4
Ho	3,142	1,747	1,660	3,409	3,573	129	119	37·2	33·3	80	73	23·1	20·4
Keta	—	3,063	3,342	6,405	6,405*	213	255	33·3	39·8	103	129	16·1	20·1
Kintampo	—	1,339	976	2,315	2,315*	49	60	21·2	25·9	69	88	29·8	38·0
Koforidua	5,364	5,816	4,713	10,529	12,208	480	390	41·4	31·9	270	259	23·0	21·2
Kpong	3,285	1,427	1,477	2,904	2,904*	88	87	30·3	30·0	54	64	18·6	22·4
Kumasi	23,694	21,219	14,610	35,829	39,773	898	957	23·3	24·1	770	782	20·0	19·7
Nsawam	6,143	4,916	3,966	8,882	9,772	243	213	25·6	21·8	184	208	19·4	21·3
Obuasi	3,917	4,746	2,852	7,598	8,794	118	123	14·0	14·0	233	277	27·7	31·5
Oda	—	3,691	2,448	6,139	6,139*	205	167	33·4	27·2	171	161	27·9	26·2
Prestea	—	1,667	822	2,489	2,489*	115	126	46·2	50·6	126	175	50·6	70·3
Salaga	3,207	2,630	2,196	4,826	5,352	173	176	33·3	32·9	127	118	24·5	22·0
Saltpond	6,342	3,277	3,092	6,369	6,378	280	244	43·9	38·3	145	142	22·7	22·3
Sekondi	9,500	10,020	6,933	16,953	19,375	371	398	19·9	20·5	232	275	12·5	14·2
Somanya	3,428	1,213	1,438	2,651	2,651*	82	59	30·9	22·3	72	89	27·1	33·6
Sunyani	—	1,568	1,243	2,811	2,811*	103	92	36·6	32·7	159	121	56·6	43·0
Takoradi	—	3,393	2,085	5,478	5,478*	130	126	23·7	23·0	43	38	7·8	6·9
Tamale	3,901	7,045	5,896	12,941	15,879	784	504	52·4	31·7	187	211	12·5	13·3
Tarkwa	2,671	2,012	1,309	3,321	3,532	95	86	27·4	24·3	185	225	53·4	63·7
Winneba	6,980	6,033	4,893	10,926	12,208	400	582	33·9	47·7	273	222	23·1	18·2
Totals and weighted averages	159,780	148,875	119,949	268,880	292,666	9,614	9,637	34·0	32·9	6,264	6,550	22·2	22·3

* In the case of towns marked with an asterisk the census population at April, 1931, is taken in lieu of an estimated mid-year population, either because the populations of such towns were not enumerated in 1921 or because their populations are decreasing.

VII.—TABLE SHOWING THE BIRTHS, DEATHS AND INFANT MORTALITY RATE AT SIX PRINCIPAL TOWNS.

Station.	1930.			1931.			1932.			1933.			1934.		
	Births.	Deaths.	Infant mortality rate.	Births.	Deaths.	Infant mortality rate.	Births.	Deaths.	Infant mortality rate.	Births.	Deaths.	Infant mortality rate.	Births.	Deaths.	Infant mortality rate.
Accra	2,599	1,250	112	2,901	1,299	95	2,576	1,282	117	2,799	1,476	117	2,827	1,514	113
Cape Coast	552	317	61	489	319	85	480	359	83	562	353	103	611	341	76
Koforidua	345	402	208	365	289	153	450	272	95	480	270	85	390	259	107
Kumasi	774	727	124	952	805	120	96	658	115	898	770	112	957	782	117
Sekondi	289	291	114	242	236	95	400	209	42	371	232	72	398	275	110
Tamale	150	145	86	416	178	625	635	158	26	784	187	30	504	211	45
Total	4,709	3,132	—	5,365	3,126	—	4,637	2,938	—	5,894	3,288	—	5,687	3,382	—

III.—HYGIENE AND SANITATION.

(a) General Review of Work Done and Progress made.

I.—PREVENTIVE MEASURES.

(*i*) *Mosquito and Insect-borne Diseases.*

(*a*) MALARIA.

45. For the sake of brevity it is not proposed on this occasion to give in detail* the various measures taken to control malaria (and other diseases). The problem presented no novel features and the incidence remained practically the same. Some 472 deaths were registered representing 7·2 per centum of all registered deaths as compared with 461 and seven per centum respectively in 1933. The death-rate per 100,000 persons living amounted to 161.

46. Amongst 35 deaths recorded in non-Africans eleven or 31·4 per centum were certified as being due to malaria and blackwater fever.

47. Splenic indices in school children examined in four of the larger towns are given below.

TABLE XXI.

Town.	PERCENTAGE WITH ENLARGED SPLEENS.	
	1933.	1934.
Accra	20	22
Cape Coast	29	26
Kumasi	24	24
Takoradi	20	17

(*b*) YELLOW FEVER.

48. The record for 1934 as regards yellow fever in the Gold Coast was a good one. This is all the more remarkable in view of the number of cases reported from neighbouring territories and in particular from the French Ivory Coast. Two fatal cases were reported in Africans both in the Colony proper. One of these (which, however, was not confirmed on pathological examination) was seen at Nkawkaw near the Ashanti border, and the second at Kokoben in the Saltpond District of the Central Province.

49. The incidence of the disease during the last ten years has been as follows :—

TABLE XXII.

Year.	Cases.	Deaths.	Percentage mortality.
1925	7	4	57
1926	65	18	28
1927	107	40	37
1928	2	2	100
1929	—	—	—
1930	2	1	50
1931	17	12	71
1932	4	—	—
1933	7*	4*	57
1934	2	2	100

50. As in previous years preventive measures consisted principally of anti-larval activities. Since the incrimination of *C. thalassius*, a very common brackish water breeder, of *Mansonioides africanus* and, possibly, *Eretmopodites chrysogaster* as potential carriers of the disease, the scope of mosquito prevention has had to be considerably widened.

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*This follows the principle laid down by the Ministry of Health—*see* the second paragraph of Circular 1455 of 6th February, 1935.

"2. Any permanent arrangements which have been fully described in previous Annual Reports and have not been altered may be omitted from the Report for 1934."

*The diagnosis was not confirmed in three cases and one death.

51. Epidemiologically, however, *Aedes ægypti* remains the main vector as far as West Africa is concerned, hence the emphasis laid on domestic hygiene.

52. In house-to-house inspections, mosquito larvæ—usually *Aedes*—were found in 9,380, an index of 0·5 compared with one of 0·6 for 1933.

53. General anti-mosquito work on the lines described in previous reports was carried out.

54. It will be remembered that a fatal case of yellow fever was reported in a European mine employee at the end of 1933, and therefore considerable anxiety was felt as to the possibility of one or more of the very many non-African mining prospectors and engineers, attracted to the Gold Coast by the gold boom, becoming infected from some hidden focus in the hinterland as the result of living in close contact with the African population.

55. Fortunately, this fear has not been realised, although several fatalities from malaria and blackwater fever have been noted in the white mining community.

56. The need for members of the highly susceptible non-indigenous community to reside in specially reserved areas which has been constantly stressed by officers of the department for the past quarter of a century and which received the unqualified support of the Yellow Fever Conference at Dakar in 1928, and of the Cape Town Conference four years later, was again brought to the notice of the Administration and to individuals who failed to comply with the rules made for the benefit of residents in such areas.

57. The lessons of the disastrous loss of life in Tamale in 1931, and in the Gambia towards the close of 1934, cannot be allowed to go for nothing.

58. Investigations were carried out in 1934 as to the possibility of establishing anti-amaryl ærodromes since Great Britain and her colonies have become parties to the International Convention for the Sanitary Control of Aerial Navigation. Two sites are available at small cost, one at Accra and the second at Tamale in the Northern Territories and Government has decided to acquire the latter forthwith.

59. Mention should be made of two other measures against yellow fever. Increasing use has been made by Europeans and others of the protection offered by a serum-vaccine given according to the method of Dr. G. M. Findlay of the Wellcome Research Institute, London. Numbers of European officials and private persons have received this form of protection with a comparatively low percentage of untoward reactions and it may be possible to make the prophylactic injection available locally in 1935.

60. Viscerotomes, kindly supplied by Dr. Findlay, were issued to the registrars of deaths at Accra, Cape Coast and Kumasi with a view to sections of liver being obtained from cases in which the death had not been certified on medical certificate and in which it had occurred after a febrile attack of less than ten days duration.

61. No instances of yellow fever have come to light from this method at present. It has, nevertheless, proved of great diagnostic value since its introduction into South American countries by the members of the Rockefeller Foundation.

62. Grateful acknowledgment is due to the medical authorities in Nigeria for carrying out mouse protection tests on sera obtained from doubtful cases of yellow fever.

(*c*) FILARIASIS.

63. No comment.

(*d*) DENGUE.

64. No comment.

(*e*) TRYPANOSOMIASIS.

65. The subject of trypanosomiasis was dealt with fully in an appendix to the annual medical report for 1933–34, and there is little new to add—(*vide* page 100 of the report in question).

66. Registered deaths from this disease numbered 116 as compared with 99 in 1933, the ratio to a hundred registered deaths from all causes being 1·5 and 1·8 for 1933 and 1934 respectively. The death-rate per 100,000 living population in the 31 registration areas was 40.

67. A focus of infection at Kumasi was the subject of investigation during the year, cases of the disease being reported in European members of the Methodist Mission and in an officer of the Gold Coast Regiment. Extensive clearing was undertaken to control fly and met with some success.

(*ii*) *Epidemic Diseases.*

(*a*) PLAGUE.

68. Frequent reports were received during the year of fatalities from plague in Dakar and other parts of the French Senegal but there was fortunately no extension to the Gold Coast.

69. As before, reliance was chiefly placed upon anti-rat measures in the ports, the proofing of warehouses, cocoa sheds and stores, the enforcement of building regulations to " build out " rats from dwellings, the efficient disposal of refuse, the protection of foodstuffs, and lastly, the destruction of rats by trapping and lithographic varnish. Over 100,000 rats were destroyed in ports and the more important centres. Little real value, however, is attached to this activity except to serve as a means of collecting rats for examination, to provide staff to keep a watch for unusual mortality in rats, and as an encouragement to householders who can be advised on the subject of rat-proofing of their premises. None of the rats examined showed signs of infection with *P. pestis*.

(*b*) CHOLERA.

70. The disease is non-existent in the Gold Coast.

(*c*) SMALLPOX.

71. The outbreak of smallpox at Ho in the Southern Section of Togoland referred to in the report for the previous year was stamped out as the result of an intensive vaccination campaign, the isolation of cases in quarantine camps and the destruction by fire of the grass-roofed, wattle-and-mud hovels in which they occurred.

72. Altogether 48 cases were discovered in the Ho District, 14 of which proved fatal. A further non-fatal case was isolated at Somanya and was found to have arrived from the Ho area. Immediate steps were taken to vaccinate all the contacts and no secondary cases were seen.

73. Lymph costing £1,827 was obtained from the Lister Institute and details of vaccinations performed are given in Table XXIII below.

TABLE XXIII.

	1933.	1934.
Total persons vaccinated	366,488	338,099
Number verified successful	87,747	73,606
Percentage successful	81	73

(*d*) ENTERIC FEVER.

74. Fifteen deaths from diseases of the enteric group were registered in 1934 as compared with 13 in 1933. The death-rate per 100,000 living in the 31 registration districts was five.

75. A small number of Europeans now take advantage of inoculation against the disease and local campaigns giving similar protection to Africans are undertaken when an outbreak of the disease occurs.

76. Continual efforts were made to ensure that as many as possible of rural as well as urban communities are provided with latrines of some sort, facilities for rubbish disposal, etc., but there remain large areas which are still almost completely lacking in these essentials—partly as the result of lack of health staff and partly because there is no legislation covering this subject in the Colony proper.

77. It is hoped that rural health legislation will be enacted during 1935 to make good this grave deficiency.

(*e*) DYSENTERY.

78. The group of diseases included in the description "dysentery, diarrhoea and enteritis" occupied the third place amongst the killing diseases, being responsible for 7·8 per centum of all registered deaths. In the 31 registration districts the death-rate per 100,000 living persons amounted to 64.

79. The fact that the majority of patients suffer from the amoebic form is, possibly, indicative of infection being fly- or food-borne rather than water-borne.

80. Experiments are being undertaken on a large scale to ascertain whether, in the absence of a water-carriage system which would cost about a quarter of a million sterling for Accra alone, pan latrines where excreta is exposed for several hours of the day can be replaced by an economical type of septic tank latrine.

81. The African custom of using corn cobs, sticks and stones, rags, etc., for purposes of abstersion increases the difficulty in designing and maintaining septic tank latrines or water-borne sewage.

(*f*) CEREBRO-SPINAL MENINGITIS.

82. No cases of cerebro-spinal meningitis were reported during the year.

(*g*) RELAPSING FEVER.

83. No deaths were registered as being due to relapsing fever in spite of the influx of thousands of labourers from the French territory of Haute Volta.

84. Tens of thousands of labourers were deloused and had their effects disinfested at the two control disinfestation stations on the Tamale–Zuarungu and Kumasi–Tamale roads.

(*h*) YAWS.

85. At welfare centres the number of cases of yaws treated was 4,984 forming 13 per centum of all cases seen.

(*iii*) *Other Diseases.*

(*a*) LEPROSY.

86. The leper settlements at Accra, Ho, Kumasi, Sekondi and Yendi continued to function satisfactorily during the year.

(*b*) TUBERCULOSIS.

87. Some 695 deaths from tuberculosis were registered as compared with 705 deaths in 1933. The percentage of deaths from tuberculosis to deaths from all causes has risen from 9·2 in 1932 to 10·5 in 1933 and 10·6 in 1934. The pulmonary form constituted over 90 per centum of all forms of the disease. In the pulmonary form the death-rate per 100,000 living persons in the areas in which death registration is carried out—containing rather less than one-tenth of the population of the Gold Coast—amounted to 219. In all forms the rate was 237.

88. Factors relating to its incidence have been dealt with in the annual report and summary of the Principal Registrar of Births, Deaths and Burials, for 1934 and will not therefore be discussed in detail in this report.

89. Two valuable amendments to the Mining Health Areas Regulations were enacted during the year with a view, *inter alia*, to combat the serious loss of life from this disease in mining labourers.

90. Firstly, the medical examination of all labourers employed on mines situated within mining health areas has been made compulsory.

91. Secondly, an obligation has been placed on the managers of mines in health areas to provide satisfactory accommodation for all labour employed.

92. The necessity for special wards for cases of tuberculosis was stressed during the year, the consensus of opinion being the hyper-susceptibility of the West African native to the acute, exudative or infantile form of the disease made the treatment of such cases in general wards a danger to other patients and to the African nursing staff alike. Carl Flügge's droplet infection theory of some 40 years ago has certainly stood the test of time.

93. It is hoped that accommodation particularly suited to cases of tuberculosis will eventually be made available at Accra—where patients have to be nursed on ward verandahs—and at Tarkwa during 1935.

(c) PNEUMONIA.

94. As in the past the group of respiratory diseases comprising pneumonia, broncho-pneumonia and bronchitis heads the list of the causes of death. The ratio per thousand deaths from these conditions was 172, 150 and 158 in 1932, 1933 and 1934 respectively.

95. In both males and females, but particularly in the former, deaths from respiratory diseases are most frequent in the age period from 25–45 years.

96. Mining labourers are, as might be expected, peculiarly prone to suffer from these diseases and it is satisfactory to know that the managements of certain of the more important mines have appreciated the need for improving underground ventilation and for providing pit-head warm baths and lockers for dry clothes for their labour.

97. The Senior Pathologist has undertaken the typing of local strains with the view to the possibility of a vaccine being produced locally for immunisation purposes.

(*iv*) *Helminthic Diseases.*

(a) ANKYLOSTOMIASIS.

98. No fresh developments need be recorded in this report concerning ankylostomiasis, ascariasis or taeniasis except as regards the issue of a circular letter of advice to mines managers advocating the use of a 20-per centum solution of salt and of common rock salt on the floors of and round latrines and in latrine buckets as being lethal to hookworm larvae.* Local authorities were advised to make a trial of cultivating *Balanites aegyptiaca* in areas where dracontiasis and schistosomiasis were prevalent, the seeds being lethal to the cyclops, cercariae and snail host.

ANIMAL DISEASES.

99. Owing to the inoculation campaign carried out by the officers of the Veterinary Department, rinderpest is being rapidly brought under control. Localised outbreaks, as in the Eastern Province in 1934, continued to occur from time to time.

100. Fatal cases of human anthrax resulting from consuming the flesh of cattle which had died of the disease were reported. The dramatic effect of intravenous organic arsenic medication in cutaneous anthrax was noted in a non-fatal case of the disease.

SEASONAL PREVALENCE OF DISEASE.

101. There is no definite seasonal prevalence of disease in the Gold Coast. As might be expected, on the other hand, respiratory conditions and inflammatory conditions of the eyes are more common in the dry season when the dusty "harmattan" wind is blowing. Malaria tends to be more in evidence after the heavy rains in June and the greatest number of deaths in 1933 and 1934 were recorded in the month of August.

102. The fact that the onset and duration of the various seasons differ to no small extent according to the geographical situation of the particular station under consideration renders impossible any close correlation for the Colony as a whole.

II.—GENERAL MEASURES OF SANITATION.

(a) SEWAGE DISPOSAL.

103. No changes were effected in the system of sewage disposal during 1934, except for the construction of an experimental septic tank latrine costing £50 at Keta, where the height of subsoil water and the possible pollution of surface wells contra-indicated the use of pit latrines.

104. Plans were drawn up for replacing the rather out-of-date pan system at the Accra European Hospital by a water-carriage unit with septic tanks and aeration beds and this welcome change-over will be introduced in 1935.

105. Water-carriage systems for private residences are becoming more and more popular in the absence of funds for a comprehensive public sewerage scheme and type plans and specifications had to be drawn up during the year as a guide so as to obviate dangerous ground pollution from effluents.

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*Lambinet's method.

106. In certain townships arrangements have been operated by means of which the chief and townspeople have paid for a pan conservancy system in preference to digging modified Salga pit latrines. Such committees as exist have, unfortunately, no legal status and the organisation is liable to break down in consequence.

107. Although the provision of latrines by the inhabitants of towns in the Colony to which the Towns Ordinance has been applied is required by law and such work is rightly regarded as a minor communal service under the terms of the Forced Labour Convention, increasing difficulty is being experienced in securing such fundamental essentials. Reports from Ashanti indicated a definite deterioration in sanitary conditions in rural areas, whilst reports from medical officers stationed in the Northern Territories confirmed the belief that—outside the main centres—promiscuous fouling of the ground round habitations was the rule.

108. A draft Townships Ordinance is, however, under consideration, and with its enactment this problem will be much more satisfactorily dealt with, at any rate in the larger villages and townships to which the Ordinance is designed to apply.

(*b*) Refuse Disposal.

109. The system in general remained unchanged during the year. Reports from some areas indicated that incinerators erected by Government and hitherto manned by labourers in the employ of chiefs were no longer being used owing to the failure of the chief to pay the labourers.

110. Trade depression may account in part for this state of affairs ; but there are other factors including the inevitable spread of education resulting in an emancipation of the intelligentsia from the feudal control of their chiefs, and the resulting political instability in certain divisions.

111. The enacting of the draft Townships Ordinance referred to above should be the means of placing this question on a rather more satisfactory footing.

(*c*) Drainage.

112. Apart from the construction and maintenance of large numbers of anti-malarial earth drains in Takoradi, Tamale and elsewhere, there is little to report under this head during 1934.

(*d*) Water Supplies.

113. The turning on of the Owabi supply for Kumasi in March, 1934, was the chief event of the year as regards public health improvements. This service was established at a cost of approximately £225,100 and an average of 240,000 gallons of water of high quality is delivered daily.

114. Advice and assistance were given to various villages in Ashanti where the chiefs and people were themselves prepared to exert efforts to improve their supplies.

115. A useful dam was built at Yendi in the British Sphere of Togoland.

116. Attention was paid to water-supplies to mines and, in some instances, managements were persuaded to incur expenditure for this purpose.

117. Koforidua, with a potential supply at hand, continued to derive its main water supply from a concrete tank filled by a polluted stream. It is earnestly hoped that funds will be made available for an adequate supply of pure water for this important township.

118. Saltpond still derives its water from rain water tanks and brackish wells and the people suffer real hardship during the dry season. Lack of funds is the only obstacle to an extension of the Cape Coast water supply.

119. Much hardship is experienced owing to shortage of potable water in many areas in the Northern Territories. To meet this, funds have been provided for a further investigation of possible supplies for the town of Salaga and elsewhere.

120. Bacteriological and, when necessary, chemical examinations of water were carried out as usual during the year. B. coli proved to be absent in 100 c.c., or less in 86·5 per centum of the samples of Accra water examined after treatment, and in 60·5 per centum of the samples taken from points of distribution in the Sekondi–Takoradi system.

121. The reduction by Government of charges for water obtained from water compounds at Labadi, Teshi, Sekondi and Winneba to one-farthing for a four-gallon tin of pure water and of the room water rate in Tamale to 6d. per year is a real boon to the poorest of the land.

(*e*) CLEARANCE OF BUSH AND UNDERGROWTH.

122. In townships where government or municipal labour was employed, controlled farming took the place of the extensive clearings which had been possible in more prosperous times.

123. In common with other sanitary measures, clearing round villages suffered to no small extent in Ashanti where, until latterly, it was customary to secure a space of 100 yards in depth.

124. The importance of clearing round villages, water supplies, fords, river-crossings, etc., with the object, *inter alia*, of mitigating the danger from tsetse, was again emphasised during the year and good work in this direction was carried out in the Protectorate and in the Northern Section of the British Sphere of Togoland.

(*f*) DOMICILIARY VISITING AND INSPECTIONS.

125. During the past three years the number of house-to-house inspections carried out by health officers and their inspectorate has risen from 1,590,647 in 1932 to 1,735,501 in 1933, and to 1,929,507 in 1934.

126. No account is taken in the above of the large number of visits by health visitors, midwives, Red Cross sisters and members of the Gold Coast League for Maternal and Child Welfare.

127. The work is organised to ensure that every house is visited once weekly at any rate in the larger centres of population.

128. Details are given below of some of the legal results of these domiciliary visits in six of the largest towns.

TABLE XXIV.

Town.	Conviction for mosquito larvæ.	Fines for larvæ.	Convictions for insanitary conditions.	Fines for insanitary conditions.
		£ *s.* *d.*		£ *s.* *d.*
Accra	287	167 13 6	2,335	485 14 0
Cape Coast	80	35 14 0	316	71 8 6
Koforidua	295	64 18 0	1,701	360 16 0
Kumasi	419	79 5 0	2,700	366 15 6
Sekondi	84	46 6 0	487	135 1 0
Tamale	244	30 3 3	302	19 1 3
Total	1,409	423 19 9	7,841	1,438 16 3

129. For the Colony and its dependencies as a whole a total of 6,275 convictions for the breeding of mosquito larvæ resulted in £1,706 0s. 3d. in fines, whilst 35,104 convictions for insanitary conditions resulted in £4,682 18s. in fines.

(*g*) OFFENSIVE TRADES.

130. Three trades may be said to come under the category as being offensive, namely, hide curing, fish curing and dyeing.

131. Hide curing for export is mostly in the hands of one commercial group and care is taken to ensure that the process is carried out in such a manner as to be free from nuisance and that the arsenic-containing washes are safely disposed of..

132. Fish curing or smoking takes place for the most part along the littoral and efforts are made in the larger towns to relegate the fish ovens to an area set apart from the town.

133. Dyeing requires little supervision aside from the fact that mosquito breeding in barrels (used for soaking the cloths preparatory to the dye being beaten into them) has to be guarded against.

III.—SCHOOL HYGIENE.

134. Shortage of staff operated against anything in the shape of a school medical service, but a full-time non-Government medical practitioner attached to Achimota College and medical officers of health devoted what little time they had to spare in inspecting school premises and surroundings and in carrying out routine mass inspections of scholars.

135. There has been a definite improvement in school buildings in the past decade but there are still several schools where lighting, ventilation, seating or sanitary accommodation leave much to be desired.

136. The table that follows provides details of one aspect of the medical examination of school children.

TABLE XXV.

Station.	No. of children examined.	Percentage with enlarged spleens.
Accra	2,188	22
Cape Coast	328	26
Kumasi	1,415	24
Takoradi	111	17

As usual a remarkable drop in the percentage of splenomegaly was recorded as the children examined advanced in age.

IV.—LABOUR CONDITIONS.

137. The increased activity in the mining industry consequent, chiefly, upon the high gold price (circa 140s. to the fine ounce) combined with economic stress in French territory, especially in the Upper Volta province, resulted in a considerable influx of immigrants.

138. At the Kumasi disinfestation station—where all immigrant labourers entering Kumasi by the north road between 6 a.m. and 6 p.m. daily are subject to delousing, bathing and disinfestation of clothing—35,717 were dealt with during the year.

139. It is usual for these labourers to find little or no work *en route* and their dietary is largely restricted to a handful of kola nuts and water from pools and streams. Many prove to be suffering from trypanosomiasis and most from worm infestation. Once, however, they secure regular work and food, their physical condition improves to an astonishing extent. Unfortunately, their habit of crowding into ill-ventilated dwellings renders them peculiarly susceptible to respiratory troubles, especially those exposed to the high temperatures and nearly saturated atmosphere met with in underground mines.

140. The resistance of this class of labour to pulmonary tuberculosis—euphemistically described as " bronchitis " by some—is nil and the proportion of deaths from this disease to deaths from all forms in a mining community like Tarkwa reached 24 per centum in 1934.

141. Rates of pay in the mines are certainly good if compared with those for labourers employed by the Public Works, Railway, Medical Department, and by commercial firms, but are not so good when the toll in sickness and deaths is considered.

142. Perhaps the system in vogue in some mines where labourers put in three or four days work underground at 3s. per day—instead of the regular daily wage of 1s. to 2s. per day obtained by ordinary labour in the Colony proper—and then spend the rest of the week in sitting around, farming and so on, helps in some respect to counteract the adverse effect of working in the mines.

143. Owing to the reduction of public works, including roads, almost to a maintenance basis and to the low price of the staple product with the result that cocoa farmers tend to clean their farms and to gather their crops without outside help, the Colony is much less able to absorb local and immigrant labour.

144. The ill-effects of the consequent unemployment have been mitigated to some extent by the " family " system—a single wage-earner cheerfully sharing his food and shelter with relatives, friends and fellow countrymen—and by a return to land cultivation. Whilst, therefore, there were only 15 deaths out of a total of 6,550 recorded as being due to starvation, there is still a very considerable amount of privation.

145. The hostel for derelicts at Kumasi, and that at Tamale constructed originally under the auspices of the Gold Coast Red Cross, cared for a number of " down and outs " daily throughout the year.

146. The increased activity in the mines has probably not affected the labour market to any considerable extent, for although the number of shafts rose from 33 to 40 during the year, the number of mine labourers increased to barely 28,000.

V.—HOUSING AND TOWN PLANNING.

147. In spite of the shortage of capital, it is significant to note that the construction of a good type of concrete or cement block house continues to take place in the more important towns. Every year the pride in substantial and well-built houses becomes more and more noticeable, especially amongst the educated classes.

148. Housing and town planning in the neighbourhood of mines gave rise to considerable concern and legislation was drafted in the effort to obviate a repetition of the grossly insanitary and congested agglomerations which had grown up in connexion with the older established mines.

149. Several lay-outs were drawn up for existing townships, as, for example, at Akropong and Asamangkese, and existing lay-outs were extended. A " green belt " was secured between the African and European townships of Accra for football, cricket and tennis and as parks and recreation grounds for both African and European communities. The need for preserving adequate areas for parks, recreation grounds and " lungs " is frequently lost sight of in rapidly developing towns in the Gold Coast.

150. The Accra Division of the Red Cross Society undertook a social survey at the suggestion of the Acting Governor with a view to submitting a scheme for the consideration of Government for the clearance of slums in the township and for rehousing the dispossessed. Nearly ten per centum of the inhabitants in Accra live in congested slum areas. The survey should be completed by April, 1935.

VI.—SANITATION IN THE MINES AREAS.

151. Whilst the standard of sanitation in and around mines is still regrettably low in many instances, real progress can generally be recorded.

152. Periodical visits of the senior officers of the Health Branch to the mines revealed a much more satisfactory spirit of co-operation and it was exceptional for a mine manager to be unwilling to accept advice on health matters. In offering such guidance, health officers naturally took into consideration the financial position of the company, its stage of development and its profit-making powers.

153. Occasionally, a manager was encountered who opposed any form of health improvement whether as regards the housing of his European or African employees or as regards the provision of a good water supply, satisfactory night-soil and refuse disposal, the carrying out of anti-mosquito work, the construction of pit-head baths, etc.

154. More often, however, managers displayed anxiety to put matters right and some undertook housing schemes for their European and African staff costing tens of thousands of pounds.

155. One of the most important steps affecting health conditions in the mines during the year related to the passing of amending regulations to the Mining Health Areas Regulations of 1926.

156. The effect of many of the existing regulations was to a large extent nullified by the presence of a qualifying clause relating to " labourers engaged outside the Colony." To all intents and purposes, mine labour has been engaged

locally for the past ten years and there is no reason to suppose that such a source will cease to be available. Consequently, important provisions in the regulations relating to the medical examination of labourers, to the housing of labourers, etc., no longer applied under the original regulations.

157. The amendments to the regulations, which took the form of Regulations No. 32 of 1934, will go a long way to setting this matter right but an addition to the Mining Health Areas Ordinance itself and a considerable modification of the original regulations will be made in 1935 in order to place mining legislation on a proper footing.

158. An important question of principle was debated and, later, adopted during the year, namely, that a mining health area should be divided into a purely mining area comprising shafts, power stations, workshops, quarters for European personnel, labourers " lines," etc., and into an outer area surrounding the first where health conditions were likely to affect the health of the mine employees.

159. Under the revised regulations which will, it is hoped, be passed early in 1935, the mine manager will be the responsible authority for health conditions in the inner or mining zone, whilst Government will take charge of the outer zone. This division of responsibility should help to prevent the occurrence of the grossly insanitary and overcrowded rookeries which surround many existing mines and which are not only a menace but a reproach.

160. The following table gives a list of those mines to which the Mining Health Areas Ordinance has been applied and to which it will be applied early in 1935.

TABLE XXVI.

Name of Mine.	Order.	Date.
Abontiakoon	No. 5 of 1927 ...	26–3–27
Aboso	No. 5 of 1927 ...	26–3–27
Adja Bepo	No. 5 of 1927 ...	26–3–27
Nsuta	No. 5 of 1927 ...	26–3–27
Prestea	No. 5 of 1927 ...	26–3–27
Konongo	No. 2 of 1934 ...	17–7–34
Takorowasi Block III	No. 30 of 1934 ...	27–11–34
Takroasi Supplement Block III	No. 31 of 1934 ...	27–11–34
Wenchi (Holland Syndicate)	No. 32 of 1934 ...	27–11–34
Bibiani	No. 33 of 1934 ...	27–11–34
Akwatia (Consolidated African Selection Trust) ...	No. 34 of 1934 ...	28–11–34
Cayco	No. 35 of 1934 ...	29–11–34
Obuom Concession	No. 5 of (Ashanti)	24–11–34
Attunsu Concession	No. 6 of (Ashanti)	24–11–34
Tamsoo and Effuenta*	—	—
Jeydem Concession*	—	—
Horton's Abosso Surface*	—	—
Boabedroo Concession*	—	—
Beposo*	—	—
Atiankumbra (West African Diamond* Syndicate)	—	—
Adowsena Concession No. 1*	—	—
Ntubia Concession*	—	—
Bogosu*	—	—

*To be applied in 1935.

161. It should be emphasised that the mine manager, the Secretary for Mines and the local Administration were invariably consulted before the relevant legislation was enacted and in the majority of instances agreement was obtained without difficulty with regard to the boundaries of the areas involved.

162. In many instances civil townships have grown up in close proximity to mines often with little or no planning or control. Efforts are being made to remedy this, partly by the appointment of a senior health officer and eight African sanitary inspectors and—in so far as the Western Province of the Colony is concerned—of a European building inspector, and partly by the enacting of a Townships Ordinance which provides means of improving sanitary conditions.

VII.—RURAL SANITATION.

163. Reference has been made on several occasions in the past few years to the set-back suffered in regard to village sanitation more especially in Ashanti where remarkable developments had taken place in the quinquennium 1924–1928. With a few exceptions, reports received as the result of routine inspections again confirmed this fact.

164. Lack of staff was responsible for this state of affairs to a certain extent, although economic conditions played their part.

165. There is every hope of a comprehensive Colony-wide Public Health Ordinance coming into existence before much longer in addition to the draft Townships Ordinance to which reference has already been made.

166. The gradual dissemination of education, and the example of hygienic conditions met with in some towns and larger villages, is undoubtedly exerting a marked influence on environmental matters ; but a considerable degree of apathy and inertia on the part of the masses still remains to be overcome.

VIII.—FOOD IN RELATION TO HEALTH AND DISEASE.

1.—Markets.

167. No new markets were constructed during the year, but there is every hope of the very congested and dilapidated market at the thriving town of Swedru in the Central Province of the Colony being replaced shortly by an up-to-date, well laid-out market.

168. Well managed and properly supervised, markets constitute a valuable form of revenue—the excess of revenue over expenditure for the Kumasi Market exceeding £3,000 in 1934.

169. There is a tendency in some districts to forget that markets are primarily intended for the sale of wholesome foodstuffs under hygienic conditions, stall accommodation being rented to vendors of cloths and dry goods whilst foodstuff sellers are obliged to sell their produce on the open spaces and roadways where foods may be contaminated by dust and debris.

2.—Slaughter-houses.

170. A new slaughter-house was constructed at Somanya in the Volta River District and plans were drawn up for new structures to be built at Ada, Keta and Oda in 1935.

3.—Cattle Sheds.

171. Apart from those at Pong-Tamale in the Northern Territories Protectorate, there are no cattle sheds in the Colony.

4.—Dairies.

172. The vast bulk of the milk consumed in the Gold Coast is imported in tins. A relatively small amount of fresh cow's milk is sold but no dairies exist and consumers are warned to strain and boil all such milk. Bovine tuberculosis is fortunately extremely rare in the Colony, one case in cattle being recorded by the Medical Officer of Health at Tamale.

5.—Aerated Water Factories.

173. Periodical inspections of premises and bacteriological examination of samples constitute the methods of controlling aerated water factories of which one or more are to be found in all the larger townships.

6.—Restaurants and Eating Shops.

174. Licences were brought into force in Kumasi in 1934, and similar control of restaurants and eating shops exists in Accra and elsewhere.

7.—Bakeries.

175. Bakeries are licensed in Kumasi and Sekondi. In most towns in which members of the Health branch staff are stationed, rules are in force compelling loaves to be exposed for sale under fly-proof covers.

8.—Food inspection.

176. The inspection of fresh food—including live-stock—and tinned food forms part of the duties of health officers and their staffs. Comparatively little foodstuffs have to be condemned and destroyed. In towns where the public slaughter-house is equipped with Soyer stoves even cysticercal flesh is sterilised by boiling and, if not infested too extensively, is allowed to be sold.

177. Cases of human intestinal anthrax were reported from time to time in Ashanti and the Northern Territories resulting from the consumption of diseased flesh.

(*a*) DEFICIENCY DISEASES.

178. During the year no deaths were attributed to rickets and only one death to beri-beri and scurvy respectively.

179. The personal equation is an important factor in the number of cases of deficiency diseases reported. For example, in one welfare centre out of a total of 9,266 cases treated 34 were diagnosed as suffering from deficiency diseases. In a second centre where a total of 9,032 patients were seen only one case of this nature was recorded. It is rather difficult to account for this difference in ratio on economic, geographical, educational or other grounds.

180. The comparatively recent discovery that red palm oil was a valuable source of vitamin A is of considerable local interest. In the same way, the relationship established by Professor Szent-Gyërgyi between ascorbic acid and vitamin C is of great practical importance, since peppers of the genus *capsicum* are obtainable throughout the length and breadth of the Gold Coast and are a popular article of diet even in very young children.

(b) Measures taken to spread the Knowledge of Hygiene and Sanitation.

I. TRAINING OF HEALTH PERSONNEL.

181. The training school for sanitary inspectors was reopened during the year in Accra as the result of the increase in the cadre approved by Government.

182. Government generously lent the premises formerly occupied by the District Administration to the Health branch for the purpose of developing a public health museum and the assembly hall proved an ideal class-room for the school.

183. As in former years village overseers were trained for the most part in Ashanti, where, in spite of all that has been said, the people in certain districts are still amenable to accepting advice on housing, village planning and lay-outs, and communal hygiene.

184. A higher standard of education is being demanded from candidates for posts in the Health branch and it is intended to require from all new members the matriculation or matriculation exemption certificate or a Second Class Teacher's Certificate after a four years course in a training college.

185. Whilst prosecutions and fines will continue to be necessary in this country—as in others where Western civilization has existed for many years—the aim of the Health branch is to teach the causes of ill-health and the means of disease prevention rather than to rely upon cœrcion.

186. Health visitors continue to be trained partly by medical officers-in-charge of welfare centres and health sisters and partly by the medical officers of health of the districts concerned.

187. In time, it is hoped to replace the whole of the present personnel—the best obtainable at the time of their appointment—by a cadre who have received a certain amount of training as nurses in welfare centres, who have secured the certificate of the Midwives Board and who have received a course of training from the medical officer of health in domestic and communal hygiene.

188. Excellent work continues to be done in the training at the Accra maternity hospital of nurse-midwives and subsidised midwives for the Health branch.

II. GENERAL HEALTH EDUCATION.

189. Hygiene forms part of the curriculum of all schools and close co-operation exists between the Department of Education and the Medical Department which ensures that such teaching is not mere parrot rote service.

190. From time to time, various ways and means are discussed of infusing fresh life into this important subject. The formation of 22 Junior Red Cross Links in various large schools and training institutions since the Red Cross movement in this Colony was founded in April, 1932, has contributed in no small fashion to the study of hygiene, first aid and welfare work. Several members of the Links at Achimota College, Wesley College and the Aburi Presbyterian Girls School obtained special certificates and proficiency badges in these subjects during 1934.

191. During the year, also, the Department of Education adopted a suggestion for health charts for classes, the purpose of which was to arouse a spirit of emulation amongst scholars regarding cleanliness, height and weight norms and general bodily health.

192. " Health Days " were also held from time to time to help school children to associate what they had learnt in school with the hygiene of the home and town.

193. Admirable work was carried on at the welfare centres where the cause of malaria, worms, malnutrition, etc., was explained to the mothers by the medical officers and their staffs. Where so much sickness exists to be relieved, it is difficult to find sufficient time to stress the preventive aspect. This feature is, nevertheless, certainly emphasised in all well-run welfare centres. The preventive teaching in the centres is, of course, also carried into the homes of the people by means of domiciliary visiting by health sisters, health visitors and midwives.

194. The general population is dealt with in the same way by the medical officers of health and their staffs and reference has already been made to the fact that over 1,929,507 house-to-house visits were made in 1934.

195. In addition, public lectures were delivered on health topics, sometimes illustrated by magic lantern and cinematograph, to scholars, school teachers, chiefs, tribunal registrars and to the general public and a good start was made in the formation of a public health museum in Accra.

196. Much credit is undoubtedly due to the Gold Coast Central Council Branch of the British Red Cross Society, and to the Gold Coast League for Maternal and Child Welfare which is a section of the Red Cross, for the rôle played in connexion with public health education. The branch was responsible for printing and distributing large numbers of popular pamphlets on air, water, food, night-soil disposal, refuse disposal, malaria, rabies and tuberculosis.

197. A further stimulus will be given when legislation is enacted enabling Township Boards to be brought into being to associate the inhabitants of the smaller townships with health improvements in their areas. This should encourage the development of a civic sense and a feeling of personal responsibility for the health conditions under which the community lives.

(c) Recommendations for Future Work.

197*a*. (1) Water supply for Koforidua.
(2) Extension of Cape Coast water supply to Elmina and Saltpond.
(3) Extension of Ho water supply to Leper Settlement.
(4) Water supply for Salaga.
(5) Construction of drainage outlet to Butua Lagoon, Takoradi.
(6) Slum clearance and rehousing in Accra, etc.
(7) Public Health legislation—townships and rural.
(8) Provision of isolation wards and ward for private patients at Gold Coast Hospital.
(9) Conversion or partial conversion of pan-system of night-soil disposal in Accra and Kumasi into water-carriage system.

P. S. SELWYN-CLARKE
Deputy Director of Health Service.

IV.—PORT HEALTH WORK.

198. No Gold Coast port was placed in quarantine during the year.

199. Every effort was made by the Health Authorities of the ports to render their terrain unsuitable for the introduction of dangerous infectious disease rather than to rely strictly upon ship quarantine which is assuming diminishing importance as time goes on. It may be of interest to note that discussions took place during the year on the question of the abolition of consular visas on bills of health and of bills of health themselves. The consensus of expert opinion has definitely moved towards abolition and this may soon be realised.

200. With the highly developed system of international exchange of information on health matters through the Ministry of Health, the Office Internationale d'Hygiene Publique, the League of Nations, West African Administrations and our consular service and with masters under an obligation to give all the necessary information regarding their ships, the need for bills of health has passed.

201. The following tabular notes are worthy of record :—

Ships entering Takoradi Harbour in 1934	540
No. infected or suspected	Nil
No. found defective—usually in cleanliness	190
No. of third class and deck passengers disembarked at Takoradi, medically examined and, where necessary, vaccinated and disinfected	9,993
No. of passengers similarly dealt with at Accra	2,467
No. of gallons of filtered and chlorinated water supplied to shipping at Takoradi by water boat and from the water main or the wharf	3,221,307

202. Some 709 rats were caught in the harbour area at Takoradi of which over 90 per centum were black rats. At Accra and Takoradi nearly 20,000 rats were trapped and about half were examined for plague infection. No evidence of *P pestis* was forthcoming.

203. A special effort was made at all ports to incinerate all refuse and to build rats out of houses, stores and warehouses. At Takoradi, for example, all buildings, stores, etc., in the harbour area have been floored in concrete with the exception of two large Custom sheds which are to be so dealt with in 1935.

V—MATERNITY AND CHILD WELFARE.

204. Admirable work continues to be done at welfare centres in the Colony and its dependencies.

205. Welfare activities are carried on through three main agencies.

206. Firstly, the Government maintains centres at Accra, Kumasi and Koforidua and, in a rather less ambitious form, at Ho, Nsawam, Tamale and Winneba.

207. Secondly, the Gold Coast Central Council Branch of the British Red Cross Society operates centres at Cape Coast and Sekondi (including Shama). It also gives valuable help in the form of voluntary and salaried workers in connexion with domiciliary visiting and baby weighing centres at Accra, including Adabraka, Christiansborg, Labadi and Teshi, and at Kumasi.

208. Thirdly, the Roman Catholic Mission carries out welfare work through trained and partially trained sisters at Djodji, Kpandu and Eikwe for which the mission receives a grant-in-aid of £175 per annum and generous supplies of dressings and simple drugs. The English Church Mission also receives a grant-in-aid of £450 per annum in respect of welfare and general medical work performed in Ashanti, more particularly at Mampong, by a mission doctor.

209. Indications of the large number of cases dealt with at the more important welfare centres during the year are given below :—

TABLE XXVII.

Government.	Attendances.	
	Children.	Expectant mothers.
Accra	13,990	—
Koforidua	18,330	5,240
Kumasi	18,998	9,115

210. In the Princess Marie Louise Hospital and welfare centre at Accra a total of 501 in-patients were dealt with during the year. At the Kumasi welfare centre the in-patients numbered 638.

211. TABLE XXVIII.

Red Cross.	Attendances.	
	Children.	Expectant mothers.
Cape Coast	11,196	4,115
Sekondi (including Shama) ...	9,132	3,325

212. In addition, baby weighing centres staffed partly by members of the Gold Coast League for Maternal and Child Welfare (British Red Cross Society) and partly by Government officers dealt with 22,739 and 19,702 attendances at Accra and Kumasi respectively. A Red Cross sister had charge of the Kumasi weighing centres and domiciliary visiting from May, 1934, to the end of the year.

213. TABLE XXIX.

Missions.	Attendances.	
	Children.	Expectant mothers.
Djodji (Roman Catholic) ...	6,560	—
Eikwe (Roman Catholic) ...	22,143	—
Kpandu (Roman Catholic) ...	20,710	—

214. No statistics are available in respect of the welfare work of the English Church Mission at Mampong in Ashanti.

215. Accra with its well-equipped maternity hospital serves as the main centre for maternity work in the Colony and a special report on the work of this hospital is included in Appendix III.

216. Briefly, 623 mothers were delivered of a total of 646 live babies with a maternal mortality per thousand total births of 48 and an infant mortality of 115.

217. Five midwives completed their training during the year and secured the Midwives Board Certificate.

218. It should be recalled that Government has approved a scheme for a hostel for 28 midwives-in-training estimated to cost £3,000 and to be erected in 1935. This will enable candidates from all over the country to be housed and boarded under sympathetic supervision during their period of training and constitutes, perhaps, one of the greatest advances in midwifery organisation since the opening of the Accra maternity hospital in 1928.

219. The popularity of this hospital is so marked that it became necessary to plan an additional ward in 1934. In the absence of Government funds and at the suggestion of the Director of Medical Services, chairman of the local branch, the Gold Coast Red Cross undertook to raise funds for the ward in question—having already provided funds for smaller extensions at the hospital.

220. The ward will be completed at the end of March, 1935, at a cost of about £1,700 subscribed by members of all communities in Accra and the Eastern Province.

221. The Ashanti division of the Society hope to build a similar ward at the Kumasi welfare centre where the existing accommodation for maternal cases is quite inadequate. Over £600 has already been subscribed for this purpose.

222. Nine nurse-midwives were employed by the Health branch during the year apart from a number of certificated private midwives who were assisted in developing a clientele by means of a small subsidy of £36 per annum each.

223. The results of work done are tabulated below :—

TABLE XXX.

	No. of nurse-midwives	f deliveries.
		507
		218
		51
		274
		50
		1,100

ERRATUM.

. of midwives &c. shown for Kumasi should read 2
Total .. 12

This service is being more and more appreciated as members of the community experience its value.

VI—HOSPITALS, DISPENSARIES AND VENEREAL CLINICS, etc.

224. A list of hospitals, welfare centres and other medical institutions is given in Appendix I to this report.

225. Return D appended hereto contains a summary of all cases, both in-and out-patients, treated at all hospitals and welfare centres in the Gold Coast and its dependencies and of all deaths occurring in such institutions.

226. The following figures afford a means of comparison for the past four years.

TABLE XXXI.

Patients Treated.

Year.	Remaining in hospital.	Total cases treated in and out-patients.	Percentage increase or decrease on previous year.	Deaths.	Remaining in hospital.	Number of deaths per thousand of the patients treated.
1931–32 ...	950	259,067	—4·3	1,409	935	5·4
1932–33 ...	935	240,056	—7·3	1,434	1,390	5·9
1933–34 ...	1,349	250,827	+4·5	1,634	1,420	6·5
1934	1,435	255,802	+1·9	1,668	1,635	6·5

(The figures for the asylum are included in those for 1934 as they were for the period 1933–34).

227. The total number of deaths per 1,000 treated did not show an improvement on those for last year. It had been suggested in the previous year's report that the debilitating effect of insufficient food and lack of variety in diet owing to the depressed financial condition of the bulk of the people might have had a bearing on the matter. There is also the consideration that owing to the cost of transport delay may take place before a serious case is removed to hospital and that the chances of recovery are thereby jeopardised. Improvement may be hoped for when better times return.

228. As may be seen from Table XXXII below there was an increase in the number of both Europeans and Africans treated in the three largest townships in the Gold Coast.

TABLE XXXII.

Africans and Europeans (In-Patients).

Station.	1931–32.		1932–33.		1933–34.		1934.	
	Europeans.	Africans.	Europeans.	Africans.	Europeans.	Africans.	Europeans.	Africans.
Accra ...	273	3,645	236	3,349	251	3,020	269	3,085
Sekondi ...	250	1,075	149	1,115	230	1,450	228	1,326
Kumasi ...	166	1,954	146	2,334	131	2,204	164	2,465
Total ...	689	6,674	531	6,798	612	6,674	661	6,876

229. The average cost per patient (including diets, provisions, fuel and light, medical comforts and kitchen staff) is shewn below :—

TABLE XXXIII.

Cost per Patient.

	1931–32.	1932–33.	1933–34.	1934.
	s. d.	*s. d.*	*s. d.*	*s. d.*
European Hospitals : (Accra, Axim, Cape Coast, Kumasi, Sekondi, Tamale, Winneba) average cost	4 4	5 1¾	4 6	3 6
African Hospitals : (Gold Coast Hospital, Accra, Axim, Cape Coast, Koforidua, Kumasi, Saltpond, Sekondi, Tamale, Winneba)	0 7½	0 7½	0 7	0 6½

230. A new hospital was built at Keta during the year to replace the old building which had been destroyed by the encroachment of the sea. It consists of three wards ; a large male ward with 18 beds ; a small official ward with 4 beds ; and a female ward with 10 beds. An excellent feature of the hospital block is the wide verandah all round, which enables beds to be accommodated there in suitable cases.

231. The theatre block with sterilizing room and anæsthetic room is attached to the main hospital block by a corridor.

232. The administration block consists of consulting room, clinical room, dispensary and dispensary store. A dressing shed is attached to the end of the administration block.

233. There are suitable quarters for four nurses.

234. The buildings are constructed of cement blocks. The roofing is of corrugated asbestos sheeting and the ceiling is of plain asbestos sheeting.

235. The water supply is obtained from 12 tanks. An excellent feature of these is that the tanks associated with each block have been linked up. A common tap is provided for each block and thus the tanks are gradually emptied in unison.

ACCRA.

236. The excellent work of the Gold Coast hospital continues. Table XXXIV below contains the necessary details.

TABLE XXXIV.

WORK DONE AT GOLD COAST HOSPITAL.

	1931–32.	1932–33.	1933–34.	1934.
Total out-patients (new)	13,261	13,137	13,473	15,612
Total in-patients (total treated)	3,645	3,349	3,020	3,085
Major operations	675	560	704	414
Minor operations	709	466	753	1,063
Daily average in-patients	223	218	227	236

237. The new X-ray plant which was installed in April, 1934, continues to function most satisfactorily. It is a great improvement on the old plant and much simpler to manipulate. The work done in this section during the year was as follows :—

Radiography :

The total number of cases was 1,357 classified as follows :—

General	1,057
Dental	76
Barium meals	55
Chests	119
Urinary tract	26
Gall-bladder	9
Maternity cases	13
	1,357

European cases	145
African cases	1,212

Electro-therapy and massage :

Massage...	3,797 attendances
Galvanism	1,865
Faradism	325
Diathermy	695
Diathermy (prostatic)...	106
Radiant heat	398
Ultra-violet radiation	175
X-ray treatment	56
Ionisation	15
	7,432

238. The number of patients attending the Venereal Disease Clinic at the Gold Coast Hospital increased during the year. Total cases dealt with increased from 1,977 in 1933–34 to 2,216 in 1934. New cases, males, increased from 811 to 946 and new cases, females, from 255 to 359. Details are given below :—

TABLE XXXV (A).

	New Cases.		Total Number of Cases receiving Treatment.	
	M.	F.	M.	F.
Urethritis	600	58	1,028	110
Prostatitis	11	—	23	—
Epididymitis	9	—	12	—
Orchitis	39	—	63	—
Arthritis	124	41	225	54
Stricture	23	1	38	3
Cervicitis	—	150	—	340
Salpingitis	—	7	—	8
Cystitis	3	13	5	14
Buboes	16	—	23	—
Syphilis, prim.	25	1	40	2
,, sec.	10	1	16	1
,, tert.	1	8	4	18
,, cong.	—	—	—	—
Soft chancre	43	—	46	—
Gran. venereum	2	—	2	—
Conjunctivitis	6	3	6	3
Other cases	18	28	27	32
Non-venereal	7	44	16	44
Schistosomiasis	9	4	9	4
Totals	946	359	1,583	633

TABLE XXXV (B).

	1933–34.	1934.
Total number of new cases (male)	811	946
Total number of new cases (female)	255	359
Total number of all new cases	1,066	1,305
Total number of cases receiving treatment (M)	1,516	1,583
Total number of cases receiving treatment (F)	461	633
Total number of all cases receiving treatment	1,977	2,216
Total number of male irrigations	10,111	12,928
Total number of female irrigations and douches	4,559	7,008
Total number of all irrigations and douches	14,670	19,936

TABLE XXXVI.

Microscopic Examination of Smears.

Specimen.	Gonococci seen.	No Gonococci seen.	Positive %.
Urethral smears (male)	267	223	54·5 %
Urethral smears (female)	7	284	2·4 %
Cervical smears	20	272	6·8 %

TABLE XXXVII.

Blood (Wassermann Test).

Reaction.	Male.	Female.
Positive	41	20
Negative	27	15
Anti-complementary	3	—

TABLE XXXVIII.

Drugs used in Treatment with Respective Number of Injections.

N.A.B.	193
B.S.T.	223
Intramine	309
Sulpharsenol	2
G.C. Vaccine	505
Ant. Tart.	49
Contramine	1
Ametox	2

Kumasi.

239. The drop in the number of attendances of out-patients at the Kumasi African hospital continued during 1934. The in-patient total increased by 261 and there is a continuous demand for accommodation for indigent persons, chiefly of French or Northern Territories origin, suffering from asthenia and malnutrition ulcers, trypanosomiasis and anæmia. The accommodation for these patients is inadequate and a new ward for such cases is greatly needed.

TABLE XXXIX.

	1931–32.	1932–33.	1933–34.	1934.
Out-patients—total	17,804	13,927	13,645	13,088
In-patients—total	1,954	2,334	2,204	2,465
Surgical operations, major	229	180	190	153
Surgical operations, minor	382	381	448	576
Average daily number in hospital	134	140	115	134·5

240. The cause of the drop in out-patients was commented upon in last year's report and no further remark need be added. Yaws accounted for 18 per cent of all cases treated.

241. In the laboratory of the hospital routine examinations are made of blood (thick and thin films), urine and fæces of all in-patients, and in this branch of work the African Laboratory Attendant has proved himself very capable and his services have been most useful.

Tamale.

242. The work at this centre has increased so rapidly during the past few years that there is a heavy strain on all members of the staff. 1,490 in-patients were treated and 20,325 out-patients (male 11,365, female 8,960) giving a total of 21,815 for 1934, as compared with 21,520 for 1933–34. Yaws constituted 27 per cent of all cases.

243. A new out-patient block was provided during the year by the conversion of an old Power House. It is complete with dispensary, consultation room, waiting room and dressing sheds. The present consulting room and dispensary will automatically be converted into a new female ward. The work is at present in hand.

Proposed new Buildings.

244. Plans for a hostel for 28 pupil midwives in connection with the maternity hospital, Accra, have been approved for 1935.

245. Similarly plans for a new African hospital at Tarkwa, the centre of the mining industry, have been approved for 1935.

Travelling Dispensaries.

246. The financial depression caused the disappearance in May, 1933, of these dispensaries which had begun to function in February, 1928.

247. The compact nature of the Colony, its satisfactory network of communication, and the widespread system of fixed hospitals and dispensaries has caused the withdrawal of the travelling dispensaries to be less severely felt than would otherwise have been the case. When further increase of services is possible the system of village dispensaries referred to below and the training of dressers for employment by the Native Administrations will be extended. This is probably a better method of providing medical services to outlying parts of the Gold Coast.

SCHEME FOR VILLAGE DISPENSARIES.

248. The position with regard to this scheme up to the end of March, 1934, is recorded at page 44 of last year's report.

249. The modifications there outlined were advanced so as to enable nursing staff to be kept up to strength and the scheme to go forward.

250. The first batch of five students sat for the examination in July, 1934. Four were successful and are now working in some of the old stations where there are no medical officers at present. It is expected that at least fifteen will qualify during 1935 and plans for opening several dispensaries exist.

251. The response however from the chiefs with regard to the erection of buildings for these dispensaries continues to be disappointing, although it is anticipated that the position will change rapidly after a few have functioned for some time.

252. It is hoped to open six new dispensaries during the coming year.

GOVERNMENT MEDICAL SCHOLARSHIPS.

253. The grant of two Government medical scholarships was made in July of 1934.

MISSION HOSPITALS AND DISPENSARIES.

Agogo Hospital.

254. The only large mission hospital in the country is that of the Basel Mission at Agogo in Ashanti. The staff consists of one European doctor assisted by three European nursing sisters and eight African nurses and nurses-in-training. The total number of in-patients during 1934 was Europeans 45 and Africans 395, and of out-patients 3,572 (with 10,741 consultations). Major operations 27 ; minor 231. The figures for out-patients include cases seen at Juaso, Konongo, and at Konongo and Atunsu Gold Mines.

ROMAN CATHOLIC MISSION.

255. The work of this mission referred to in previous reports has gone on actively throughout the year, and Government has continued to encourage its activities by issuing grants-in-aid and supplies of drugs and dressings. The following are the more important centres at which medical work is undertaken : Kpandu, Djodji, Eikwe, and Jirapa (in the Northern Territories). These centres are visited regularly by the district medical officers for the purpose of giving their advice and assistance.

Report on the Work of the Dental Clinic, Gold Coast Hospital, Accra, 1934.

256. Mr. Donald, Dental Surgeon, was on duty during the period from January to December, 1934.

257. In addition to the work carried on at Accra he visited Kumasi (twice), Tamale, Sekondi, and Cape Coast.

258. The following shows the number of patients of all classes treated during the period :—

Patients :—

Officials :	Europeans :	467		
	Africans :	2,369	=	2,836
Non-officials :	Europeans	437		
	Africans	423	=	860

259. Following is a classification of patients treated, with figures for 1932–33, 1933–34, and 1934.

TABLE XL.

Record of Work Done.

		1932–33.	1933–34.	1934.
Officials	(a) European	407	435	467
,,	(b) African	3,086	1,981	2,367
Non-officials	(a) European	517	371	437
,,	(b) African	426	285	423
	Total number of cases treated ...	4,436	3,072	3,694

260. The following statement shows the number of dental operations performed :—

	Officials.	Non-officials.	Total.
(a) Extractions :			
Local anaesthesia	2,547	527	3,074
General anaesthesia	34	27	61
(b) Fillings :			
Gold	—	10	10
Amalgam	345	201	546
Porcelain	105	48	153
Cement	158	54	212
Temporary	49	32	81
(c) Dressings :			
Including root treatment	581	361	942
(d) Scalings	231	144	375
(e) Bridges, crowns, and other restorations	9	9	18
(f) Dentures	81	57	138
(g) Repairs to bridge dentures and crowns	67	42	109
(h) Minor treatment	23	28	51

261. The chief pathological conditions met with during the period were as follows :—

(1)	Dental caries	2121
(2)	Dental abscess	469
(3)	Pulpitis, acute and chronic	132
(4)	Periodontitis, acute and chronic	79
(5)	Excessive calcific deposit	31
(6)	Cases diagnosed as true pyorrhoea alveolaris (chronic sub-periodontitis)	234
(7)	Gingivitis	49
(8)	Septic roots	61
(9)	Stomatitis	14
(10)	Sepsis arising in connection with eruption of permanent dentition	37
(11)	Malposition of teeth	12
(12)	Fracture of teeth	14
(13)	Necrosis of alveolus	9
(14)	Neuralgia of non-dental origin	2
(15)	Polypus of pulp	4
(16)	Pulp stones	1
(17)	Excessive post-extraction haemorrhage	5
(18)	Supernumerary teeth	24
(19)	Dental cyst	2
(20)	Epulis	1
(21)	Fibrous sarcoma of jaw	1
(22)	Antrum disease	1
(23)	Cancrum oris	1

VII—PRISONS AND ASYLUMS.

(a) Prisons.

(*The information in this Report was kindly furnished by the Director of Prisons*).

262. The Government prisons consist of four convict prisons and 21 local prisons. The former are situated at Accra, Sekondi, Kumasi and Tamale; in these prisons all long-sentence prisoners are confined.

263. The local prisons are situated at various district headquarters throughout the country and accommodate prisoners with sentences of six months and under. These vary greatly in construction and capacity; Fort Orange Prison, Sekondi, Elmina, Cape Coast and Keta are converted forts and while they afford security they are lacking in ventilation. Improvements have been made where possible but there leaves much to be desired in this respect.

264. The more modern local prisons such as Tarkwa, Obuasi, Akuse and Ho are of good design, of a permanent nature and are in every way suitable for the purpose they serve. They accommodate from forty to sixty prisoners. At the end of the scale are the bush prisons which are found in the more remote districts. They are built of swish and house about ten to fifteen prisoners.

265. In all prisons, prisoners sleep in association. In the convict prisons the cells are small and accommodate three prisoners each. In the local prisons large association cells are the rule some of which can accommodate ten to fifteen prisoners. There are single cells at most prisons where prisoners can be segregated for medical reasons or for the purpose of punishment.

266. There are infirmaries at the four convict prisons under the immediate charge of a warder with a knowledge of sick nursing, and at Elmina there are wards where tubercular prisoners and those suffering from leprosy can be segregated. There is accommodation for females at Accra, Elmina, Kumasi, Keta, Akuse and Tamale.

267. Long-sentence prisoners are employed on various industries in the convict prisons. Short-sentence prisoners are chiefly employed on extramural work such as conservancy, farming and general station work.

268. The hours of labour are from 6 a.m. to 11 a.m. and from 12.30 p.m. to 3 p.m.

269. All prisons are regularly visited by medical officers. Half-yearly medical reports disclose a satisfactory state of affairs with the exception of Keta prison which has been over-crowded. Arrangements have been made to reopen Ada prison which, it is hoped, will accommodate the overflow from Keta.

270. The daily average on the sick list was 61·24 or 3·1 per cent as compared with 2·57 per cent in 1933–34 out of a total population of 1967·37. Exclusive of executions there were 38 deaths or 20 per thousand. The chief ailments were guinea-worm, gonorrhoea, malaria, and ulcers. There was an epidemic of a mild form of chickenpox at Accra prison which took some time to stamp out owing to the difficulty of segregating contacts and by admissions of fresh cases contracted outside and becoming apparent a day or two afterwards.

271. Prisoners are weighed monthly. They usually show an increase of weight and are generally discharged in better physical condition than they were in on admission.

272. The rations issued were according to scale and were good and sufficient. They can be increased or altered at the direction of the prison medical officer. The diet scale is adhered to in all prisons except those in districts where the staple diet of the inhabitants differs. For instance millet takes the place of corn in the Northern Territories and cassada and plantains are substituted in certain districts in Ashanti.

273. At Accra prisoners live under very satisfactory conditions and the routine of good regular meals and discipline improves their general health. All long-sentence prisoners are taught a trade such as carpentry, tailoring, weaving, brush-making, cobbling, upholstery, and blacksmithing.

(b) Asylum

CENTRAL ASYLUM, ACCRA.

274. Staff—On the 31st December, 1934, the staff consisted of the following :—

Alienist Officer	1	European
Head Attendant	1	African
Assistant Attendant	1	,,
Matron	1	,,
Male Mental Nurses	21	,,
Female Mental Nurse	1	,,
Gatekeeper	1	,,

275. During the year the staff was increased by three male attendants.

276. On the 1st January, 1934, and on the 31st December, 1934, the number of immates was as follows :—

	1st January.	*31st December.*
Male, criminal	60	62
,, pauper	250	268
Female, criminal	1	1
,, pauper	60	62
	371	393

showing an increase of 22 during the year.

277. The table below shows admissions, deaths and discharges over a period of years :—

TABLE XLI.

	1931–32.	1932–33.	1933–34.	1934.	
Remaining 1st April ...	326	355	375	Remaining 1st January 1934	371
Admitted during the year	127	132	123	Admitted during the year	145
Discharged during the year	35	22	35	Discharged during the year	37
Escaped during the year ...	4	4	1	Escaped during the year	—
Deaths during the year ...	58	86	80	Deaths during the year	89
Remaining on 31st March	355	375	382	Remaining on 31st December, 1934 ...	393

278. The discharges and deaths are not satisfactory and no great improvement can be expected until a modern asylum is built with adequate accommodation and facilities for grading the patients.

279. During the year a sum of £1,400 was voted to increase accommodation. Work commenced in October and is due to be completed in February, 1935. An association ward to accommodate 66 patients will be added together with enlargement of the yard for criminal lunatics and the erection of seven single rooms to receive violent patients. Three more single rooms will be added to the female portion.

280. The diet is excellent and adequate and is supplemented by food from the asylum farm.

281. The sanitation and hygiene is satisfactory.

282. Although the extra accommodation provided during 1934 will undoubtedly ease the situation, the lack of facilities for grading, etc., is unsatisfactory and militates against the recovery of the patients and the erection of a properly designed mental hospital should be undertaken as early as the financial situation permits.

VIII—METEOROLOGY.

TABLE XLII.

(*a*) METEOROLOGY—AVERAGE FIGURES FOR THE YEAR 1934.

	Temperature.					Rainfall.		Wind.		Remarks.
	Solar max.	Min. on grass.	Shade max.	Range.	Mean.	Amt. in Inches.	Degree of Hum.	Gen. dir.	Av. force.	
Accra ...	142·0	71·0	85·3	15·9	80·8	2·40	76·6	W.	2·2	—
Kumasi ...	135·5	—	89·2	27·3	79·3	4·39	84·5	SW.	1·8	—
Sekondi ...	145·4	72·5	90·0	22·2	80·2	4·10	70·9	SW.	1·4	—
Takoradi ...	137·1	72·4	90·0	22·0	81·6	4·43	82·7	SSW.	1·9	—
Tamale ...	152·6	66·2	93·7	32·8	80·8	6·37	66·1	SW.	1·2	—

TABLE XLIII.

(*b*) METEOROLOGICAL OBSERVATIONS, LABORATORY GROUNDS, KAWLI BU, ACCRA, 9 A.M. READINGS, 1934.

	Rainfall in inches.	Highest maximum temperature recorded.	Lowest temperature recorded.	Daily average mean temperature.	Temperature of the due point.	
					Highest.	Lowest.
January	0·6	86	73	79·6	74	62
February	Nil	87	74	81·6	76	65
March	4·06	87	74	81·1	77	70
April	2·395	88	75	82·1	77	71
May	5·42	87	75	82·1	77	70
June	4·52	86	73	78·9	75	70
July	5·34	84	74	78·3	75	71
August	1·07	83	74	78·5	75	71
September	2·89	84	74	78·3	74	70
October	0·72	84	73	79·8	74	70
November	0·21	86	75	80·9	74	72
December	1·119	86	74	80·5	76	71

Total Rainfall 28·3 inches.

IX—SCIENTIFIC.

(a) Annual Report of the Laboratory Service.

283. This report refers to the work done in the Accra laboratory during the period 1st January to 31st December, 1934.

REPORT ON ROUTINE WORK.

284. *Yaws and Syphilis.*—Three thousand two hundred and ninety-two Wassermann tests were carried out. Thirty-six per cent were positive.

285. *Infections due to organisms of the Salmonella group.*—The number of infections in this group diagnosed by culture of the organisms, and agglutination is shown in the accompanying table.

TABLE XLIV.

	Culture.			*Agglutination.*	
	Blood.	Faeces.	Urine.		Total
S. typhi	8	2	—	22	32
S. paratyphi A.	2	—	1	4	7
S. paratyphi B	—	—	—	1	1
S. paratyphi C	1(p.m.)	—	—	1	2
S. enteritidis	—	—	—	2	2
				Total	44

286. The number of agglutination tests carried out for organisms of this group was 178. One hundred and thirty-one were completely negative, and 19 contain agglutinins for S. typhi, paratyphi A. and paratyphi B. and were obviously due to inoculation with T.A.B. vaccine either prophylactically or as protein shock treatment.

TABLE XLV.

287. Dysentery.—Stools examined.		E.Histolytica	Balantidium coli	Lamblia testinalis
(*a*) *Protozoal*	3,194	81	4	1

(*b*) *Bacillary.*—Two hundred and ninety stools were examined bacteriologically. Bact. flexneri was isolated 17 times. Bact. shiga was isolated once, Schmitz bacillus twice, and Sonne bacillus once.

288. *Blood Cultures.*—The accompanying table shows the number and type of organisms met with :—

TABLE XLVI.

Organism.	*No. of times isolated*
S. typhi	8
S. paratyphi A	2
Ps. pyocyanea	3
Pneumococcus	1
Haem. streptococcus	3
Streptococcus viridans type	4
Anaerobic streptococcus	1
Staph. aureus	2
Bact. coli	2
Cl. welchi	1
Small gram-negative non-motile anaerobic bacillus	1
Bact. friedlander	1
Total pos.	29
Negative	99
Total cultures	128

289. *Diphtheria.*—Seven cases of diphtheria were seen in Accra during the year, virulent strain of C. diphtheriae were isolated from four of these. Two of these strains were of the " mitis " type and the other two strains resembled the intermediate type and are being further investigated. Six of the cases were African children between the ages of 7 months and 5 years. The seventh case was a European. In two cases death occurred very rapidly. A number of Schick tests coupled with throat and nasal swabbing have been performed on Africans between 5 and 20 years of age. This is the beginning of an investigation to try to determine the source of the immunity to diphtheria which the African possesses or appears to possess. The figures obtained so far are too small for publication but tend to indicate that the immunity in Accra, where several cases of diphtheria have occurred, is not so complete as in other parts of West Africa where diphtheria has not been recognised. That the African obtains his immunity through subclinical infection with the diphtheria bacillus is difficult to believe.

290. *Histological Examinations.*—Material from 255 cases was examined, this included 15 carcinomata and 13 sarcomata.

291. Statistical returns of routine examinations including repeat tests.

TABLE XLVII.

Examinations of Blood.	Total.
(*a*) For parasites—Total	5,453
(1) Malaria parasites	1,327
(2) Trypanosomes	13
(3) Microfilariae	101
(*b*) Differential and complete counts	53
(*c*) Agglutinations	198
(*d*) Blood cultures	128
(*e*) Wassermann tests	3,292

TABLE XLVII—*contd.*

Examinations of Blood—*contd.*	Total.
(*f*) Chemical examinations—Total	85
(1) Urea	39
(2) Sugar	38
(3) Alkali reserve	1
(4) Van den Bergh	7
(*g*) Blood Grouping	6
Examinations of Faeces—Total	4,149
(*a*) General examinations	3,194
(*b*) Bacteriological	290
Examinations of Urine—Total	2,475
(*a*) General	2,056
(*b*) Bilharzial infections	129
(*c*) Bacteriological	129
Examinations of sputa	783
Miscellaneous examinations including pus	758
Cerebro-spinal fluids	27
Post-mortem examinations	123
Bacteriological examinations of drinking water	275
Animal inoculations	44
Rat examinations	2,040

292. Post-Mortem Examinations.

TABLE XLVIII.

Infectious and Parasitic Diseases.	
Typhoid fever	1
Paratyphoid C	1
Meningitis pneumococcal	1
Pulmonary tuberculosis	4
Generalised tuberculosis	6
Septicaemia	7
Malaria	1
Diphtheria	1
Pyaemia	1
Cancer and other Tumours.	
Carcinoma liver	2
Carcinoma bladder	2
Lymphosarcoma	1
Mediastinal sarcoma	1
Diseases of circulatory System	
Myocardial degeneration	5
Aneurism of aorta	1
Obstruction of coronary artery	1
Pulmonary embolism	1
Diseases of Respiratory System.	
Lobar-pneumonia	6
Broncho-pneumonia	5
Chronic interstitial pneumonia	1
Lung abscess	1
Diseases of Digestive System.	
Peritonitis	8
Cirrhosis of liver	4
Gumma of liver	1
Fatty degeneration of liver	1
Liver abscess	1
Acute enteritis	1
Intestinal obstruction	1
Colitis	1
Chloroform poisoning (delayed)	1

TABLE XLVIII—*contd.*

	Total.
Diseases of the Genito-urinary System.	
Chronic nephritis	1
Addison's disease (Tuberculous)	1
Diseases of Pregnancy.	
Rupture Tubal pregnancy	1
Eclampsia	1
Diseases of early Infancy.	
Still-birth	11
Diseases from violence.	
General injuries	9
Hanging	2
Ruptured spleen	1
Drowning	2
Fractured skull	4
Cerebral haemorrhage	2
Gunshot wounds	5
Cut throat	1
Asphyxia	1
Burns	1
Knife wounds	1
Ill-defined Diseases.	
Poisoning by native medicine	1
Anaemia	11
Acute toxic jaundice	1
Post-operative haemorrhage	1
Unknown	5

293. Water Examinations.

TABLE XLIX.

Source.	*Negative.*	*B. coli found in* 100 *cc.*	10 *cc.*	1 *cc.*	0.1 *cc.*	*Total.*
1.—ACCRA WATER SUPPLY.						
No. 1 Final Filter	12	1	—	—	—	13
No. 2 Final Filter	8	2	1	—	—	11
No. 3 Final Filter	12	—	—	—	-	12
No. 4 Final Filter	12	—	—	—	—	12
No. 5 Final Filter	12	—	—	—	—	12
No. 6 Final Filter	11	1	—	—	—	12
No. 1 Storage Reservoir	8	3	6	—	—	17
No. 2 Storage Reservoir	5	3	6	—	—	14
Laboratory Tap	50	2	—	—	—	52
Taps in Town	—	2	1	—	—	3
Waterworks Reservoir Inlet	1	—	—	—	—	1
Waterworks Reservoir Outlet	1	—	—	—	—	1
No. 1 Prefilter	—	1	—	—	—	1
Labadi Reservoir	—	1	—	—	—	1
2.—OUTSTATIONS.						
Bathing Pool, Tarkwa	—	—	—	2	—	2
Konongo	2	1	—	1	—	4
Bogosu	—	—	2	—	—	2
Winneba	3	—	—	—	—	3
Kumasi	19	—	1	—	–	20
Nsuta	—	1	—	1	1	3
Anum	—	—	—	2	—	2
Takoradi	2	—	—	—	—	2
Tarkwa and Abosso Mines	—	—	4	3	—	7
Aman	—	—	—	1	—	1
Sunen	—	—	—	—	1	1
3.—Soda Waters	54	4	7	1	—	66
Total	212	22	28	11	2	275

(b) Annual Report of the Analytical Chemist, 1934.

294. The total number of samples dealt with was 1,768.

295. This total was made up as follows :—

TABLE L.

(a) *Coroners and Medical Officers :*		
Viscera	33	
Medicines, etc.	7	
		40
(b) *Customs :*		
Brandy	13	
Geneva	15	
Gin	6	
Liqueur	3	
Rum	9	
Whisky	21	
Beer and stout	54	
Port	15	
Sherry	12	
Tonic and medicated wines	70	
Vermouth	72	
Wine (other kinds)	421	
Medicine (patent and other)	128	
Methylated spirit	41	
Milk	47	
Paint, varnish, etc.	17	
Perfumery	85	
Miscellaneous	143	
		1,172
(c) *Medical and Health Services :*		
Drinking water	27	
Miscellaneous	31	
		58
(d) *Police :*		
Illicit spirits	477	
Native medicine, etc.	4	
Miscellaneous	11	
		492
(e) *Other Departments :*		
Miscellaneous	6	
		6
Total		1,768

296. These figures show a striking similarity to those in the last report (1933-34) in practically every detail.

297. It may, however, be of interest to contrast the progressive diminution in the number of samples of gin, geneva and rum (the spirits most favoured by the African) received from the Customs Department with the rise in the number of suspected illicit spirits received from the police.

TABLE LI.

Year.	*Imported samples.*	*Local samples.*
1928–29	138	—
1929–30	132	—
1930–31	92	22
1931–32	37	133
1932–33	49	387
1933–34	27	484
1934	30	477

298. In this connexion may be mentioned a sample of Monrovia illicit spirit (presumed) submitted by the Customs Department, which broadly speaking presented the same characteristics as the local product ; and a piece of apparatus submitted by the police which proved to be a still of a very efficient design for the purpose of producing strong alcohol from liquids of low alcohol-content such as palm-wine.

299. A case of (apparent) fatal poisoning with strychnos alkaloids is recorded. The case was one of attempted secret burial. The medical officer suspected alkaloidal poisoning, and the coroner ordered a chemical analysis. A quantity of 0·6 grain of alkaloid was recovered from the stomach and the relatively small portions of intestines forwarded, but chemical and physiological tests indicated that only a small proportion of the alkaloid was strychnine. A reasonable hypothesis seems to be that the victim was treated for some form of sickness with a native medicine prepared from one of the half-dozen species of strychnos recorded by Irvine (*Plants of the Gold Coast*).

300. Other work of a miscellaneous character included samples of " raw " water before, during and after treatment with alum and chlorine, and the testing of the efficiency of various samples of cloth, with reference to emergency treatment of obviously foul water in order to render it reasonably safe for drinking purposes ; and an investigation on behalf of the Director of Prisons into the cause of corrosion of boilers and other utensils, etc., used in the preparation of food for prisoners.

301. Mr. F. R. Johnson, M.SC. (London), F.I.C., was appointed Analytical Chemist on 10th January, 1934, to fill the vacancy created by the retirement on pension of Mr. R. Simmons, F.I.C., and arrived in the Colony and assumed duty on 24th January, 1934.

D. DUFF.
Director of Medical Services.

RETURNS.

RETURN A.

MEDICAL, HEALTH AND LABORATORY SERVICE STAFF ON THE 1ST JANUARY, 1934.

	Authorised establishment.	Provision in estimates.	Vacancy.
Director of Medical and Sanitary Services	1	1	—
Deputy Director of Medical Service	1	1	—
Deputy Director of Health Service	1	1	—
Deputy Director of Laboratory Service	—	—	—
Assistant Director of Medical Service	2	1	—
Assistant Director of Health Service	—	—	—
Specialists (one surgical and one medical)	2	2	—
Senior Health Officers	2	2	—
Senior Medical Officers	6	6	—
Senior Pathologist	1	1	—
Pathologists	2	2	—
Medical Officers	35	35	—
Medical Officers of Health	8	8	—
Alienist Officer	1	1	—
Woman Medical Officer	1	1	—
Women Medical Officers (Welfare Centres)	4	4	—
African Medical Officers	4	4	—
Radiographer	1	1	—
Assistant Radiographer	1	1	—
Dental Surgeon	1	1	—
African Government Dentist	1	—	—
Analytical Chemist	2	2	—
Dispensers' Instructor	1	1	—
Medical Storekeeper	1	1	—
Secretary, Gold Coast Hospital	1	1	—
Chief Sanitary Superintendent	1	1	—
Sanitary Superintendents	19	19	—
Laboratory Assistants	2	2	—
EUROPEAN NURSING STAFF.			
Matron	1	1	—
Senior Nursing Sisters	3	3	—
Nursing Sisters	27	27	—
MEMBERS OF THE SUBORDINATE STAFF. MEDICAL BRANCH.			
Chief Dispensers	2	2	—
First Division Dispensers	6	6	—
Second Division Dispensers and Dispensers-in-Training	63	63	—
Laboratory Attendants	2	2	—
Chief Nurses	—	—	—
First Division Nurses	6	6	—
Second Division Nurses and Nurses-in-Training	210	210	—
Midwives	3	3	—
Midwives-in-Training	6	6	—
Office Assistant and Accountant	1	1	—
First Division Clerks	2	2	—
Second Division Clerks	22	22	—
Lodge-Keepers	2	2	—
Telephone Operators	4	4	—
LUNATIC ASYLUM.			
Head Attendant	1	1	—
Assistant Attendant	1	1	—
Mental Nurses	24	24	—
Matron	1	1	—
Gatekeeper	1	1	—
HEALTH BRANCH.			
Chief Clerk	1	1	—
First Division Clerk	1	1	—
Second Division Clerks	18	18	—
Sanitary Inspector and Training Officer	1	1	—
Senior Division Sanitary Inspectors	2	2	—
First Division Sanitary Inspectors	5	5	—
Second Division Sanitary Inspectors and Sanitary Inspectors-in-Training	97	97	—
Storekeepers	2	2	—
Disinfector Mechanic	1	1	—
Vaccinators	12	12	—
Senior Village Overseer	1	1	—
Village Overseers	18	18	—
Assistant Disinfector Mechanics	4	4	—
Nurse-Midwives	9	9	—
Second Division Dispensers	4	4	—

RETURN A—*contd.*

	Authorised establishment.	Provision in estimates.	Vacancy.
HEALTH BRANCH—*contd.*			
Second Division Nurses and Nurses-in-Training	13	13	—
Health Visitors	4	4	—
Engineering Fitter	1	1	—
Market Clerks	4	4	—
CONTAGIOUS DISEASES HOSPITAL.			
Caretaker	1	1	—
Attendants	3	3	—
MEDICAL RESEARCH INSTITUTE.			
Laboratory Attendants	9	9	—
Second Division Clerk	1	1	—

RETURN B.

FINANCE.

Estimated Expenditure for the year 1934.

(*a*) PERSONAL EMOLUMENTS.

Medical.

	£	*s.*	*d.*
Administrative officers	4,300	0	0
Specialists	2,700	0	0
Senior Medical Officers	6,720	0	0
Medical Officers (European and African)	34,840	0	0
Dental Surgeon	960	0	0
European Nursing Staff	13,594	0	0
African Nursing Staff and Dispensers	31,880	0	0
Clerical staff	3,926	0	0
Various items, allowances, etc.	13,322	0	0
Estimated total Personal Emoluments	£112,242	0	0
Actual total Personal Emoluments	107,810	18	1

Health.

	£	*s.*	*d.*
Administrative officers	1,400	0	0
Senior Health Officers and Medical Officers of Health	9,729	0	0
European Sanitary Superintendents	9,228	0	0
African Sanitary Inspectors	15,271	0	0
Various items, allowances, etc.	15,409	0	0
Estimated total Personal Emoluments	£51,037	0	0
Actual total Personal Emoluments	48,722	10	11

Laboratory Service.

	£	*s.*	*d.*
European staff	4,686	0	0
African staff	1,230	0	0
Estimated total Personal Emoluments	£5,916	0	0
Actual total Personal Emoluments	6,240	3	4

(*b*) OTHER CHARGES.

Medical.

	£	s.	d.
Passages, transport, etc.	11,163	0	0
Hospital equipment, drugs, medical appliances, surgical instruments, etc.	15,750	0	0
Diets, medical comforts	8,950	0	0
Other items	14,563	0	0
Estimated Total	£50,426	0	0
Actual Expenditure	51,603	2	1

Health.

	£	s.	d.
Passages, transport, etc.	6,024	0	0
General Health votes	34,337	0	0
Scavengers and labourers	29,352	0	0
Estimated Total	£69,713	0	0
Actual Expenditure	67,058	9	5

Laboratory Service.

	£	s.	d.
Passages, transport, etc.	524	0	0
General Research votes	540	0	0
Estimated Total	1,064	0	0
Actual Expenditure	822	9	

	£	s.	d.
Estimated Total Expenditure, Medical Department (All Branches)	£290,398	0	0
Actual Total Expenditure, Medical Department (All Branches) ...	282,257	13	7

Revenue earned by Medical Branch :—

	£	s.	d.
(*a*) Hospital fees	10,251	13	9
(*b*) Sale of drugs in private practice	361	10	0
(*c*) Re-imbursement by Railway Department and Takoradi Harbour	1,940	0	0
Total	£12,553	3	9

Revenue earned by Health Branch :—

	£	s.	d.
(*a*) Fines for sanitary offences	6,388	18	3
(*b*) Market and Slaughter house fees	11,894	14	2
(*c*) Poundage fees	171	14	4
(*d*) Births, deaths, and burials	681	19	2
(*e*) Re-imbursement by Railway Department and Takoradi Harbour	2,315	0	0
(*f*) Conservancy fees	5,716	19	6
(*g*) Fees collected at Infant Clinics	2,721	18	4
Total	£29,891	3	9

RETURN C.

POPULATION OF THE GOLD COAST AND ITS DEPENDENCIES, MID-YEAR 1934

	Census 1921.	Males.	Females.	Persons.	Mid-year 1934.
A.—RESIDENT AFRICANS.					
1. Colony	1,171,913	806,466	764,828	1,571,294	1,701,093
2. Ashanti	406,193	298,341	279,737	578,078	633,941
3. Northern Territories	530,355	360,260	357,015	717,275	778,024
4. Togoland under British Mandate ...	187,939	150,464	143,207	293,671	328,034
Total	2,296,400	1,615,531	1,544,787	3,160,318	3,441,092
B.—RESIDENT NON-AFRICANS.					
1. Colony	1,530	1,839	465	2,304	2,304
2. Ashanti	447	491	133	624	624
3. Northern Territories	36	89	18	107	107
4. Togoland under British Mandate ...	20	33	10	43	43
Total	2,033	2,452	626	3,078	3,078

RETURN C—*contd.*

	Census 1921.	Males.	Females.	Persons.	Mid-year 1934.
C.—MARITIME.					
1. Africans	1,157	68	—	68	68
2. Non-Africans	371	104	—	104	104
Total	1,528	172	—	172	172
D.—THE GOLD COAST AND ITS DEPENDENCIES.					
1. Africans :—					
(*a*) Resident	2,108,461	1,465,067	1,401,580	2,866,647	3,113,057
(*b*) Maritime	1,157	68	—	68	68
Total	2,109,618	1,465,135	1,401,580	2,866,715	3,113,125
2. Non-Africans :—					
(*a*) Resident	2,013	2,419	616	3,035	3,035
(*b*) Maritime	371	104	—	104	104
Total	2,384	2,523	616	3,139	3,139
E.—TOGOLAND UNDER BRITISH MANDATE.					
1. Africans	187,939	150,464	143,207	293,671	328,034
2. Non-Africans	20	33	10	43	43
Total	187,959	150,497	143,217	293,714	328,077
Grand Total	2,299,961	1,618,155	1,545,413	3,163,568	3,444,341

RETURN D.

Return of Diseases and Deaths (In-Patients) and Diseases (Out-Patients) for the Year 1934.

RETURN D.

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND DISEASES (OUT-PATIENTS) FOR THE YEAR 1934.

DISEASES.	IN-PATIENTS.					OUT-PATIENTS.	
	Remaining in hospital on 1st January, 1934.	Yearly Total.		Total cases treated.	Remaining in hospital on 31st December, 1934.	Male.	Female.
		Admissions.	Deaths.				
I.—*Epidemic, endemic, and infectious diseases.*							
1. Enteric group—							
(*a*) Tyhoid fever ...	5	40	12	45	5	6	4
(*b*) Paratyphoid A ...	—	9	—	9	—	—	—
(*c*) Paratyphoid B ...	1	1	—	2	—	—	—
(*d*) Type not defined	—	9	—	9	—	2	1
2. Typhus	—	—	—	—	—	—	—
3. Relapsing fever ...	—	—	—	—	—	—	—
4. Undulant fever	—	—	—	—	—	—	—
5. Malaria—							
(*a*) Tertian	1	58	2	59	1	293	130
(*b*) Quartan	—	8	1	8	—	10	7
(*c*) Aestivo-autumnal	16	1,187	19	1,203	33	6,975	4,094
(*d*) Cachexia	—	22	8	22	—	151	106
(*e*) Blackwater ...	1	17	8	18	—	3	1
(*f*) Unclassified ...	5	230	11	235	6	5,909	5,334
6. Small-pox	—	—	—	—	—	1	—
7. Measles	—	9	—	9	—	86	68
8. Scarlet fever	—	—	—	—	—	—	—
9. Whooping cough ...	2	15	3	17	—	446	452
10. Diphtheria	—	9	4	9	—	5	7
11. Influenza	2	68	2	70	2	180	78
12. Miliary fever	—	—	—	—	—	1	1
13. Mumps	1	84	—	85	1	214	60
14. Cholera	—	—	—	—	—	—	2
15. Epidemic diarrhoea ...	—	—	—	—	—	—	—
16. Dysentery—							
(*a*) Amœbic	3	201	13	204	6	256	102
(*b*) Bacillary	1	41	5	42	—	39	21
(*c*) Undefined or due to other causes ...	3	67	14	70	—	290	169
17. Plague—							
(*a*) Bubonic	—	—	—	—	—	—	—
(*b*) Pneumonic ...	—	—	—	—	—	—	—
(*c*) Septicæmic ...	—	—	—	—	—	—	—
(*d*) Undefined ...	—	—	—	—	—	—	—
18. Yellow fever	—	2	2	2	—	—	—
19. Spirochætosis ictero-hæmorrhagica ...	—	—	—	—	—	—	—
20. Leprosy	102	43	9	145	93	478	265
21. Erysipelas	—	5	2	5	—	2	2
22. Acute poliomyelitis ...	—	3	1	3	—	7	2
23. Encephalitis lethargica...	2	—	—	2	—	1	1
24. Epidemic cerebro-spinal fever	—	—	—	—	—	—	—
25. Other epidemic diseases—							
(*a*) Rubeola (German measles) ...	—	1	—	1	—	15	2
(*b*) Varicella (chicken-pox)	4	284	1	288	16	323	35
(*c*) Kala-azar ...	—	—	—	—	—	—	—
(*d*) Phlebotomus fever	—	—	—	—	—	—	—
(*e*) Dengue	—	5	—	5	—	7	3
(*f*) Epidemic dropsy	—	—	—	—	—	—	—
(*g*) Yaws	19	356	15	375	57	36,930	28,498
(*h*) Trypanosomiasis	100	1,359	114	1,459	245	404	120
26. Glanders	—	—	—	—	—	—	—
27. Anthrax	—	1	—	1	—	—	—
28. Rabies	—	1	1	1	—	1	—
29. Tetanus	1	33	16	34	2	19	4
30. Mycosis	—	—	—	—	—	—	2
31. Tuberculosis, pulmonary and laryngeal ...	28	350	182	378	29	536	160
32. Tuberculosis of the meninges or central nervous system ...	—	4	2	4	—	4	4
33. Tuberculosis of the intestines or peritoneum ...	—	12	5	12	—	4	1

RETURN D—*contd.*

Return of Diseases and Deaths (In-Patients) and Diseases (Out-Patients) for the Year 1934.

Diseases.	In-Patients.					Out-Patients.	
	Remaining in hospital on 1st January, 1934.	Yearly Total.		Total cases treated.	Remaining in hospital on 31st December, 1934.	Male.	Female.
		Admissions.	Deaths.				
I.—*Epidemic, endemic, and infectious diseases* (contd.)							
34. Tuberculosis of the vertebral column ...	3	29	8	32	6	22	10
35. Tuberculosis of bones and joints	5	14	—	19	5	16	6
36. Tuberculosis of other organs—							
(*a*) Skin or subcutaneous tissue (lupus) ...	—	—	—	—	—	1	—
(*b*) Bones	—	1	1	1	—	4	2
(*c*) Lymphatic system	6	4	1	30	4	6	1
(*d*) Genito-urinary ...	—	2	1	2	1	—	—
(*e*) Other organs ...	—	1	1	1	—	—	—
37. Tuberculosis disseminated—							
(*a*) Acute	—	5	4	5	—	3	2
(*b*) Chronic	—	2	1	2	—	1	—
38. Syphilis—							
(*a*) Primary	3	40	—	43	—	111	17
(*b*) Secondary... ...	1	26	—	27	—	75	25
(*c*) Tertiary	7	60	13	67	4	181	136
(*d*) Hereditary ...	—	10	1	10	—	16	14
(*e*) Period not indicated	1	19	—	20	—	58	23
39. Soft chancre	4	43	—	47	4	178	—
40. A.—Gonorrhoea and its complications ...	13	319	2	332	14	2,992	376
B.—Gonorrhoeal ophthalmia ...	3	47	—	50	2	112	100
C.—Gonorrhoeal arthritis	5	60	—	65	2	291	68
D.—Granuloma venereum	1	5	1	6	2	6	2
41. Septicæmia	—	26	18	26	1	7	1
42. Other infectious diseases	—	3	2	3	—	—	16
II.—*General diseases not mentioned above.*							
43. Cancer or other malignant tumours of the buccal cavity ...	—	3	2	3	—	—	1
44. Cancer or other malignant tumours of the stomach or liver ...	—	15	9	15	—	6	2
45. Cancer or other malignant tumours of the peritoneum, intestines, rectum	1	11	9	12	—	1	1
46. Cancer or other malignant tumours of the female genital organs	—	3	1	3	1	—	5
47. Cancer or other malignant tumours of the breast	—	1	—	1	—	—	4
48. Cancer or other malignant tumours of the skin	1	10	—	11	—	5	2
49. Cancer or other malignant tumours of organs not specified	2	25	13	27	1	26	11
50. Tumours non-malignant	6	74	2	80	5	239	101
51. Acute rheumatism ...	—	7	1	7	—	7	8
52. Chronic rheumatism ...	1	110	—	111	3	3,710	1,867
53. Scurvy (including Barlow's disease) ...	—	—	—	—	—	2	4
54. Pellagra	—	7	1	7	1	1	2
55. A.—Beri-beri	—	5	1	5	2	4	—
B.—Avitaminosis ...		16	7	16	—	45	46

RETURN D—*contd.*

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND DISEASES (OUT-PATIENTS) FOR THE YEAR 1934.

DISEASES.	IN-PATIENTS.					OUT-PATIENTS.	
	Remaining in hospital on 1st January, 1934.	Yearly Total.		Total cases treated.	Remaining in hospital on 31st December, 1934.	Male.	Female.
		Admissions.	Deaths.				
II.—*General diseases not mentioned above* (contd.)							
56. Rickets	1	1	—	2	1	5	6
57. Diabetes (not including insipidus)	5	18	3	23	—	13	5
58. Anæmia—							
(*a*) Pernicious... ...	—	2	1	2	—	3	—
(*b*) Other anæmias and chlorosis ...	4	73	16	77	3	385	338
59. Diseases of the pituitary body	—	—	—	—	—	2	—
60. Diseases of the thyroid gland—							
(*a*) Exophthalmic goitre	—	2	1	2	—	8	27
(*b*) Other diseases of the thyroid gland, myxœdema ...	—	3	—	3	—	7	23
61. Diseases of the parathyroid glands ...	—	—	—	—	—	—	—
62. Diseases of the thymus	—	—	—	—	—	—	—
63. Diseases of the suprarenal glands	—	—	—	—	—	—	—
64. Disease of the spleen ...		8	1	9	2	97	66
65. Leukæmia—							
(*a*) Leukæmia... ...	—	1	—	1	—	1	1
(*b*) Hodgkin's disease	—	4	1	4	—	4	—
66. Alcoholism	—	6	—	6	—	6	—
67. Chronic poisoning by mineral substances (lead, mercury, etc.)	—	3	—	3	—	—	1
68. Chronic poisoning by organic substances (morphia, cocaine, etc.)	—	—	—	—	—	—	—
69. Other general diseases—							
(*a*) Auto-intoxication	—	1	1	1	—	4	—
(*b*) Purpura hæmorrhagica	—	—	—	—	—	2	—
(*c*) Hæmophilia ...	—	—	—	—	—	—	—
(*d*) Diabetes insipidus	—	1	—	1	—	—	—
III.—*Affections of the Nervous System and Organs of the senses.*							
70. Encephalitis (not including encephalitis lethargica)	—	8	3	8	—	8	5
71. Meningitis (not including tuberculous meningitis or cerebrospinal meningitis)	—	23	15	23	—	7	6
72. Locomotor ataxia ...	—	1	1	1	—	9	—
73. Other affections of the spinal cord	—	11	—	11	1	12	10
74. Apoplexy—							
(*a*) Hæmorrhage ...	1	31	21	32	—	6	5
(*b*) Embolism ...	—	2	—	2	—	1	—
(*c*) Thrombosis ...	1	12	3	13	1	12	7
75. Paralysis—							
(*a*) Hemiplegia ...	6	39	4	45	7	78	25
(*b*) Other paralyses ...	6	40	1	46	6	79	36
76. General paralysis of the insane	—	—	—	—	—	—	—
77. Other forms of mental alienation	13	179	4	522	371	49	4
78. Epilepsy	16	39	1	55	20	74	27
79. Eclampsia, convulsions (non-puerperal) 5 years or over	—	—	—	—	—	7	6

RETURN D—*contd.*

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND DISEASES (OUT-PATIENTS) FOR THE YEAR 1934.

DISEASES.	IN-PATIENTS.					OUT-PATIENTS.	
	Remaining in hospital on 1st January, 1934.	Yearly Total.		Total cases treated.	Remaining in hospital on 31st December, 1934.	Male.	Female.
		Admissions.	Deaths.				
III.—*Affections of the nervous system and organs of the senses.* (contd.)							
80. Infantile convulsions ...	—	27	13	27	1	32	30
81. Chorea	—	—	—	—	—	—	—
82. A.—Hysteria	—	13	—	13	—	4	11
B.—Neuritis	3	17	—	20	1	139	56
C.—Neurasthenia ...	—	20	—	20	2	82	31
83. Cerebral softening ...	1	3	—	4	—	6	1
84. Other affections of the nervous system, such as paralysis agitans ...	2	21	3	23	2	29	11
85. Affections of the organs of vision—							
(*a*) Diseases of the eye	—	59	1	59	1	424	142
(*b*) Conjunctivitis ...	12	262	—	274	9	3,549	2,792
(*c*) Trachoma ...	1	3	—	4	—	15	29
(*d*) Tumours of the eye	—	5	—	5	1	11	2
(*e*) Other affections of the eye	15	151	—	166	3	982	478
86. Affections of the ear or mastoid sinus ...	3	77	—	80	4	1,798	991
IV.—*Affections of the circulatory system.*							
87. Pericarditis	—	4	2	4	—	2	—
88. Acute endocarditis or myocarditis	—	8	3	8	—	8	7
89. Angina pectoris ...	—	2	—	2	—	5	1
90. Other Diseases of the Heart—	—	1	—	1	—	12	6
A.—Valvular— ...	—	6	2	6	—	10	3
(*a*) Mitral	6	58	14	64	3	96	45
(*b*) Aortic	1	30	4	31	—	41	19
(*c*) Tricuspid ...	—	1	—	1	—	—	—
(*d*) Pulmonary ...	—	—	—	—	—	3	—
B.—Myocarditis ...	5	60	27	65	—	96	53
91. Diseases of the arteries—							
(*a*) Aneurism	1	13	4	14	2	12	1
(*b*) Arterio-sclerosis ...	—	4	—	4	—	26	8
(*c*) Other diseases ...	2	8	2	10	1	28	7
92. Embolism or thrombosis non-cerebral	—	—	—	—	—	1	1
93. Diseases of the veins—							
(*a*) Hæmorrhoids ...	3	36	—	39	2	304	73
(*b*) Varicose veins ...	1	—	—	1	—	18	4
(*c*) Phlebitis	1	—	—	1	—	3	1
94. Diseases of the lymphatic system—							
(*a*) Lymphangitis ...	—	16	—	16	—	50	20
(*b*) Lymphadenitis, bubo (non-specific) ...	12	187	2	199	7	586	156
95. Hæmorrhage of undetermined cause	—	13	1	13	—	18	10
96. Other affections of the circulatory system ...	—	19	8	19	—	21	5

RETURN D—*cont.*

ETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND DISEASES (OUT-PATIENTS) FOR THE YEAR 1934.

DISEASES.	IN-PATIENTS.					OUT-PATIENTS.	
	Remaining in hospital on 1st January, 1934.	Yearly Total.		Total cases treated.	Remaining in hospital on 31st December, 1934.	Male.	Female.
		Admissions.	Deaths.				
V.—*Affections of the respiratory system.*							
97. Diseases of the nasal passages—							
(*a*) Adenoids	—	4	—	4	—	9	5
(*b*) Polypus	—	2	—	2	—	6	2
(*c*) Rhinitis	—	4	—	4	—	123	53
(*d*) Coryza	2	80	—	82	—	2,196	924
(*e*) Ill—defined ...	—	9	—	9	—	21	8
98. Affections of the larynx—							
(*a*) Laryngitis... ...	—	21	—	21	—	171	61
99. Bronchitis—							
(*a*) Acute	4	231	4	235	7	4,759	3,187
(*b*) Chronic	5	93	22	98	3	1,748	949
100. Broncho-pneumonia ...	5	161	59	166	1	166	124
101. Pneumonia—							
(*a*) Lobar	11	307	88	318	8	195	80
(*b*) Unclassified ...	5	82	25	87	2	96	40
102. Pleurisy, empyema ...	4	106	5	110	3	227	56
103. Congestion of the lungs	1	20	1	21	—	15	8
104. Gangrene of the lungs ...	—	2	2	2	—	1	—
105. Asthma	1	52	4	53	1	141	68
106. Pulmonary emphysema	—	3	1	3	—	3	—
107. Other affections of the lungs—	—	4	—	4	—	5	2
(*a*) Pulmonary spirochætosis ...	—	—	—	—	—	—	—
VI.—*Diseases of the digestive system.*							
108. A—Diseases of teeth or gums—	—	9	—	9	—	115	73
Caries, pyorrhœa, etc. ...	—	77	3	77	3	2,053	1,052
B.—Other affections of the mouth— ...	—	6	2	6	—	40	27
(*a*) Stomatitis... ...	2	36	1	38	—	599	522
(*b*) Glossitis, etc. ...	—	21	—	21	—	230	186
109. Affections of the pharynx or tonsils—							
(*a*) Tonsillitis ...	1	77	—	78	—	324	211
(*b*) Pharyngitis ...	—	34	2	34	1	308	130
110. Affections of the œsophagus	—	3	—	3	—	4	1
111. A.—Ulcer of the stomach	—	3	1	3	—	2	—
B.—Ulcer of the duodenum	1	5	—	6	—	7	—
112. Other affections of the stomach—							
(*a*) Gastritis	—	55	—	55	1	237	143
(*b*) Dyspepsia, etc. ...	1	47	1	48	1	982	575
113 and 114. Diarrhœa and enteritis—							
A.—Under two years ...	1	50	6	51	—	900	771
B.—Two years and over	3	383	14	386	6	1,397	652
(*a*) Colitis	—	41	—	41	—	207	117
(*b*) Ulceration ...	—	3	1	3	—	—	—
(*c*) Other diseases ...	1	18	—	19	—	144	137
114a. Sprue	—	—	—	—	—	—	—
115. Ankylostomiasis ...	4	139	10	143	6	149	62
116. Diseases due to intestinal parasites—							
(*a*) Cestoda (tænia) ...	1	49	—	50	1	873	319
(*b*) Tremotoda (flukes)	—	—	—	—	—	—	—
(*c*) Nematoda (other than ankylostoma)— ...	—	1	—	1	—	4	1
(i) Ascaris ...	4	115	2	119	3	659	516

RETURN D—*cont.*

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND DISEASES (OUT-PATIENTS) FOR THE YEAR 1934.

DISEASES.	IN-PATIENTS.					OUT-PATIENTS.	
	Remaining in hospital on 1st January, 1934.	Yearly Total.		Total cases treated.	Remaining in hospital on 31st December, 1934.	Male.	Female.
		Admissions.	Deaths.				
VI.—*Diseases of the digestive system* (contd.)							
(ii) Trichocephalus dispar ...	—	—	—	—	—	—	—
(iii) Trichina ...	—	—	—	—	—	1	—
(iv) Dracunculus	9	215	1	224	6	623	198
(v) Strongylus ...	—	3	1	3	—	3	12
(vi) Oxyuris ...	—	1	—	1	—	25	11
(*d*) Coccidia	—	—	—	—	—	—	—
(*e*) Other parasites ...	—	—	—	—	—	6	—
(*f*) Unclassified ...	—	3	—	3	—	19	4
117. Appendicitis	2	24	2	26	1	20	6
118. Hernia	14	185	12	199	8	462	14
119. A.—Affections of the anus, fistula, etc. ...	5	80	1	85	10	132	67
B.—Other affections of the intestines— ...	1	15	7	16	—	97	34
(*a*) Enteroptosis ...	1	9	—	10	—	1	2
(*b*) Constipation ...	—	92	—	92	2	8,579	2,646
120. Acute yellow atrophy of the liver	—	—	—	—	—	—	—
121. Hydatid of the liver ...	—	—	—	—	—	—	—
122. Cirrhosis of the liver—							
(*a*) Alcoholic	—	2	—	2	—	—	—
(*b*) Other forms ...	6	31	20	37	1	34	6
123. Biliary calculus	—	—	—	—	—	—	—
124. Other affections of the liver—	—	—	—	—	—	—	1
(*a*) Abscess	4	28	7	32	1	31	7
(*b*) Hepatitis	1	37	2	38	2	93	31
(*c*) Cholecystitis ...	—	14	—	14	—	8	4
(*d*) Jaundice	1	51	3	52	3	100	38
125. Diseases of the pancreas	—	—	—	—	—	—	—
126. Peritonitis (of unknown cause)	—	22	15	22	—	6	5
127. Other affections of the digestive system ...	1	14	6	15	—	43	34
VII.—*Diseases of the genito-urinary system (non-venereal).*							
128. Acute nephritis	6	77	20	83	2	88	71
129. Chronic nephritis ...	5	89	35	94	8	102	27
130. A.—Chyluria	—	5	—	5	—	1	—
B.—Schistosomiasis ...	5	115	8	120	5	401	127
131. Other affections of the kidneys—							
(*a*) Pyelitis, etc. ...	1	23	3	24	—	24	5
132. Urinary calculus ...	1	12	—	13	—	2	1
133. Diseases of the bladder—	—	1	—	1	—	4	1
(*a*) Cystitis	6	114	5	120	8	270	152
134. Diseases of the urethra—							
(*a*) Stricture	12	222	11	234	11	302	2
(*b*) Other	8	99	1	107	12	165	35
135. Diseases of the prostate—							
(*a*) Hypertrophy ...	—	7	—	7	1	2	—
(*b*) Prostatitis ...	—	23	—	23	1	121	—
136. Diseases (non-venereal) of the genital organs of man—	—	—	—	—	—	1	—
(*a*) Epididymitis ...	—	42	—	42	1	90	—
(*b*) Orchitis	4	123	—	127	6	323	—
(*c*) Hydrocele ...	3	62	—	65	4	202	—
(*d*) Ulcer of penis ...	3	81	1	84	11	288	—
(*e*) Phimosis and paraphimosis ...	3	197	—	200	—	310	—
137. Cysts or other non-malignant tumours of the ovaries	—	11	3	11	10 —	—	11

RETURN D—*contd.*

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND DISEASES (OUT-PATIENTS) FOR THE YEAR 1934.

DISEASES.	IN-PATIENTS.					OUT-PATIENTS.	
	Remaining in hospital on 1st January, 1934.	Yearly Total.		Total cases treated.	Remaining in hospital on 31st December, 1934.	Male.	Female.
		Adm'ssions.	Deaths.				
VII.—*Diseases of the genito-urinary system (non-venereal* (contd.)							
138. Salpingitis	1	71	1	72	3	—	123
(*a*) Abscess of the pelvis	—	7	1	7	—	—	60
139. Uterine tumours (non-malignant)	3	30	2	33	1	—	66
140. Uterine hœmorrhage (non-puerperal) ...	—	3	—	3	—	—	94
141. A.—Metritis	—	46	—	46	3	—	480
B.—Other affections of the female genital organs— ...	2	34	2	36	5	—	67
(*a*) Displacements of uterus	—	17	—	17	—	—	104
(*b*) Amenorrhœa ...	—	4	—	4	—	—	250
(*c*) Dysmenorrhœa ...	2	36	—	38	1	—	666
(*d*) Leucorrhœa ...	—	9	—	9	1	—	146
142. Diseases of the breast (non-puerperal)—							
(*a*) Mastitis	2	15	—	17	—	1	149
(*b*) Abscess of breast...	1	10	—	11	—	—	32
VIII.—*Puerperal State.*							
143. A.—Normal labour ...	14	647	—	661	15	—	295
B.—Accidents of pregnancy—							
(*a*) Abortion	7	188	—	195	1	—	129
(*b*) Ectopic gestation	1	7	2	8	2	—	2
(*c*) Other accidents of pregnancy ...	4	207	32	211	8	—	131
C.—Maternal welfare (ante-natal) ...	5	679	3	684	15	—	8,111
D.—Post-natal examinations— mothers and infant ...	—	78	4	78	—	706	1,714
144. Puerperal hœmorrhage	—	7	1	7	—	—	2
145. Other accidents of parturition	5	250	44	255	5	—	11
146. Puerperal septicœmia ...	—	29	12	29	—	—	14
147. Phlegmasia dolens ...	—	—	—	—	—	—	—
148. Puerperal eclampsia ...	1	15	6	16	—	—	1
149. Sequelœ of labour ...	1	48	11	49	2	—	13
150. Puerperal affections of the breast	—	8	—	8	—	—	20
IX.—*Affections of the skin and cellular tissues.*							
151. Gangrene	—	38	11	38	2	21	11
152. Boil—	5	99	—	104	2	947	268
(*a*) Carbuncle ...	—	30	—	30	—	264	61
153. Abscess—	23	389	9	412	26	644	229
(*a*) Whitlow	2	96	—	98	3	410	141
(*b*) Cellulitis	17	455	20	472	19	915	224
154. A.—Tinea	1	3	—	4	—	1,264	573
B.—Scabies	3	21	—	24	1	3,296	2,840
155. Other diseases of the skin	4	34	—	38	1	858	568
(*a*) Erythema ...	1	23	—	24	—	485	302
(*b*) Urticaria	—	18	—	18	—	640	366
(*c*) Eczema	1	18	—	19	1	719	432
(*d*) Herpes	—	20	—	20	—	117	35
(*e*) Psoriasis	—	4	—	4	1	42	21
(*f*) Elephantiasis ...	5	48	2	53	8	122	27
(*g*) Myiasis	—	—	—	—	—	9	4
(*h*) Chiggers	—	1	—	1	—	5	2
(*i*) Cutaneous leishmaniasis ...	1	—	—	1	—	—	—
(*j*) Ulcers	110	984	28	1,094	127	8,011	4,404

RETURN D—*contd.*

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND DISEASES (OUT-PATIENTS) FOR THE YEAR 1934.

DISEASES.	IN-PATIENTS.					OUT-PATIENTS.	
	Remaining in hospital on 1st January, 1934.	Yearly Total.		Total cases treated.	Remaining in hospital on 31st December, 1934.	Male.	Female.
		Admissions.	Deaths.				
X.—*Diseases of bones and organs of locomotion* (*other than tuberculous*).							
156. Diseases of bones—							
(*a*) Osteitis	3	37	2	40	3	486	380
(*b*) Osteo-myelitis ...	10	42	4	52	11	56	20
157. Diseases of joints—							
(*a*) Arthritis	15	182	7	197	14	1,778	866
(*b*) Synovitis	4	112	—	116	5	457	149
158. Other diseases of bones or organs of locomotion	5	68	—	73	2	534	260
(*a*) Fibrositis	3	70	—	73	2	1,017	316
XI.—*Malformations.*							
159. Malformations— ...	—	—	—	—	—	—	—
(*a*) Hydrocephalus ...	—	1	—	1	—	11	6
(*b*) Hypospadias ...	—	—	—	—	—	2	—
(*c*) Spina bifida, etc.	—	6	1	6	1	10	9
XII.—*Diseases of infancy.*							
160. Congenital debility ...	—	24	15	24	—	180	165
161. Premature birth ...	—	63	23	63	2	18	26
162. Other affections of infancy	4	92	28	96	2	191	171
163. Infant neglect (infants of three months or over)	—	2	1	2	—	5	10
(*a*) New born infants	24	629	56	653	15	87	108
XIII.—*Affections of old age.*							
164. Senility—	1	10	5	11	1	54	29
Senile dementia ...	7	8	7	15	6	1	5
XIV.—*Affections produced by external causes.*							
165. Suicide by poisoning ...	—	1	1	1	—	—	—
166. Corrosive poisoning (intentional)	—	2	1	2	—	—	—
167. Suicide by gas poisoning	—	—	—	—	—	—	—
168. Suicide by hanging or strangulation ...	—	—	—	—	—	—	1
169. Suicide by drowning ...	—	—	—	—	—	—	—
170. Suicide by fire-arms ...	—	—	—	—	—	1	—
171. Suicide by cutting or stabbing instruments	—	1	1	1	—	—	—
172. Suicide by jumping from a height	—	—	—	—	—	—	—
173. Suicide by crushing ...	—	—	—	—	—	—	—
174. Other suicide	—	—	—	—	—	—	—
(*a*) Attempted suicide	1	15	—	16	1	4	—
175. Food poisoning— ...	—	10	—	10	—	4	3
(*a*) Botulism	—	—	—	—	—	—	—
176. Attacks of poisonous animals—							
(*a*) Snake bite ...	1	51	1	52	1	46	7
(*b*) Insect bite or sting	—	25	—	25	—	139	54
177. Other accidental poisonings	—	34	4	34	1	28	8
178. Burns (by fire)	3	66	14	69	4	221	124
179. Burns (other than by fire)	3	50	6	53	3	102	38
180. Suffocation (accidental)	—	3	—	3	—	—	—
181. Poisoning by gas (accidental)	—	2	—	2	—	1	—
182. Drowning (accidental) ...	—	2	1	2	—	3	—
183. Wounds (by fire-arms, war excepted) ...	7	115	16	122	6	50	3

RETURN D—Contd.

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND DISEASES (OUT-PATIENTS) FOR THE YEAR 1934.

Diseases.	In-Patients.					Out-Patients.	
	Remaining in hospital on 1st January, 1934.	Yearly Total.		Total cases treated.	Remaining in hospital on 31st December, 1934.	Male.	Female.
		Admissions.	Deaths.				
XIV.—*Affections produced by external causes* (contd.)							
184. Wounds (by cutting or stabbing instruments)	48	757	18	805	35	3,877	522
185. Wounds (by fall) ...	10	236	4	246	10	1,523	303
186. Wounds (in mines or quarries)	7	203	3	210	4	1,656	1
187. Wounds (by machinery)	—	37	3	37	2	443	15
188. Wounds (crushing, e.g. railway accidents, etc.)	13	217	14	230	8	202	22
189. Injuries inflicted by animals, bites, kicks, etc.	—	75	1	75	2	317	111
190. Wounds inflicted on active service ...	—	—	—	—	—	—	—
191. Executions of civilians by belligerents ...	—	—	—	—	—	—	—
192. A.—Over-fatigue ...	—	6	1	6	—	1	—
B.—Hunger or thirst ...	1	13	4	14	—	6	3
193. Exposure to cold, frost bite, etc.	—	—	—	—	—	2	—
194. Exposure to heat—							
(*a*) Heatstroke ...	—	7	—	7	—	2	2
(*b*) Sunstroke ...	—	4	—	4	—	1	—
195. Lightning stroke ...	—	1	—	1	—	—	—
196. Electric shock	—	4	—	4	—	1	—
197. Murder by firearms ...	—	—	—	—	—	—	2
198. Murder by cutting or stabbing instruments	—	1	1	1	—	4	1
199. Murder by other means	—	—	—	—	—	—	—
200. Infanticide (murder of an infant under one year)	—	—	—	—	—	—	—
201. A.—Dislocation ...	1	30	—	31	1	44	21
B.—Sprain	4	98	—	102	2	662	100
C.—Fracture	38	365	26	403	37	259	70
202. Other external injuries	11	345	3	356	16	2,232	450
203. Deaths by violence of unknown cause ...	—	—	—	—	—	—	1
XV.—*Ill-defined diseases.*							
204. Sudden death (cause unknown	—	—	—	—	—	—	—
205. A.—Diseases not already specified or ill-defined—							
(*a*) Ascites	—	41	12	41	2	50	18
(*b*) Œdema	1	24	—	25	1	75	30
(*c*) Asthenia	4	161	39	165	4	661	334
(*d*) Shock	2	14	3	16	—	4	4
(*e*) Hyperpyrexia ...	—	—	—	—	—	1	1
(*f*) Neuralgia and headache (undiagnosed) ...	1	30	—	31	—	515	217
(*g*) Other diseases ...	3	61	13	64	3	340	204
B.—Malingering ...	—	26	—	26	—	204	11
C.—Observation cases ...	3	135	—	138	7	228	100
D.—Pyrexia of uncertain origin	3	86	5	89	2	370	161
XVI.—*Diseases, the total of which have not caused ten deaths.*	—	1	—	1	—	49	22
Total ...	1,435	21,100	1,668	22,535	1,635	141,800	91,467

Operations :—
Major ... ... 782 Minor ... ... 3,016.

RETURN E.

Summary of Work of Medical and Health Branches.

Diseases.	In-Patients.					Out-Patients.	
	Remaining in hospital on 1st January, 1934.	Yearly Total.		Total cases treated.	Remaining in hospital on 31st December, 1934.	Male.	Female.
		Admissions.	Deaths.				
Medical	1,272	19,584	1,450	20,856	1,484	125,112	70,058
Health Branch—							
Welfare centres	49	1,123	177	1,172	49	16,667	21,399
Contagious diseases hospitals	114	393	41	507	102	21	10
	1,435	21,100	1,668	22,535	1,635	141,800	91,467

RETURN F.

Analysis of the more Important Conditions dealt with in the Out-Patients Department of the Child Welfare Centres during 1934.

Disease.	Male.	Female.	Total.	Ratio to diseases due to all causes.
Malaria	5,746	5,948	11,694	30.7
Yaws	2,651	2,333	4,984	13.1
Diseases of respiratory system	1,976	2,018	3,994	10.5
Parasitic skin diseases	1,056	1,157	2,213	5.8
Constipation	668	624	1,292	3.4
Diarrhœa and enteritis	584	526	1,110	2.9
Diseases of teeth, gums and mouth	487	472	959	2.5
Diseases of infancy	347	340	687	1.8
Intestinal parasites	283	294	577	1.5
Diseases of the eye	268	298	566	1.5
Whooping cough	253	263	516	1.4
Ulcers	245	263	508	1.3
Dysentery	126	112	238	0.6
Injuries (external causes)	110	95	205	0.5
Diseases of lymphatic system	38	44	82	0.2
Measles	33	36	69	0.2
Other conditions	1,796	6,576	8,372	22.0
Total	16,667	21,399	38,066	—

RETURN G.

Deliveries by Midwives in 1934 (Health Branch).

Accra.	Cape Coast.	Koforidua.	Kumasi.	Sekondi.	Grand Total.
507	218	51	274	50	1,100

APPENDICES.

APPENDIX I.

GOVERNMENT HOSPITAL BED ACCOMMODATION AND DISPENSARIES, GOLD COAST COLONY, ASHANTI, NORTHERN TERRITORIES AND BRITISH SPHERE OF TOGOLAND, MEDICAL BRANCH.

COLONY. EASTERN PROVINCE.	HOSPITAL.		EUROPEAN.				AFRICAN.				Dispensaries.	Medical staff (Medical officers and women Medical officers).	REMARKS.
	European.	African.	Total Beds at present.		Number of Beds possible.		Total Beds at present.		Number of Beds possible.				
			M.	F.	M.	F.	M.	F.	M.	F.			
Accra	1	1	15	3	15	3	170+7 cots	46+11 cots	170+7 cots	46+11 cots	2	5 (M.O.s.)	
Accra, Cantonments	—	1	—	—	—	—	6	—	6	—	1	1 (M.O.)	
Accra Maternity	—	1	—	—	—	—	—	39+28 cots	—	20+20 cots	—	1 (W.M.O.)	
Accra P. M. L. Hospital	—	1	—	—	—	—	—	3+25 cots	—	3+25 cots	1	1 (W.M.O.)	A children's Hospital and welfare centre.
Accra, Christiansborg	—	—	—	—	—	—	—	—	—	—	1	1 (W.M.O.)	Welfare centre—closed.
Ada	—	1	—	—	—	—	4	4	4	4	1	1 (M.O.)	
Akuse	—	1	—	—	—	—	12	6	12	8	1	1 (M.O.)	
Keta	—	1	—	—	—	—	22	10	22	10	1	1 (M.O.)	
Kibi	—	1	—	—	—	—	16	4	16	4	1	1 (M.O.)	
Koforidua	—	1	—	—	—	—	19	6	19	6	1	1 (M.O.)	
Koforidua	—	—	—	—	—	—	—	—	—	—	1	1 (W.M.O.)	Welfare centre.
Mpraeso	—	1	—	—	—	—	8	6	8	8	1	1 (M.O.)	
Nsawam	—	1	—	—	—	—	9	3	9	3	1	1 (M.O.)	
Total	1	11	15	3	15	3	266+7 cots	127+64 cots	266+7 cots	112+56 cots	13	17	

APPENDIX I—*contd.*

GOVERNMENT HOSPITAL BED ACCOMMODATION AND DISPENSARIES, GOLD COAST COLONY, ASHANTI, NORTHERN TERRITORIES AND BRITISH SPHERE OF TOGOLAND, MEDICAL BRANCH.

COLONY. CENTRAL PROVINCE.	HOSPITAL.		EUROPEAN.				AFRICAN.				Dispensaries.	Medical staff (Medical officers and women Medical officers).	REMARKS.
	European.	African.	Total Beds at present.		Number of Beds possible.		Total Beds at present.		Number of Beds possible.				
			M.	F.	M.	F.	M.	F.	M.	F.			
Cape Coast	1	1	2	—	3	—	22	19	24	22	1	1 (M.O.)	
Cape Coast	—	—	—	—	—	—	1 cot	1 cot	—	4+6 cots	1	1 Red Cross sister	Red Cross welfare centre.
Dunkwa	—	1	—	—	—	—	10	4	21	5	1	1 (M.O.)	
Elmina	—	—	—	—	—	—	—	—	—	—	1	1 (M.O.)	Visiting from Cape Coast.
Oda	—	1	—	—	—	—	12	4	12+2 cots	4+1 cot	1	1 (M.O.)	
Saltpond	—	1	—	—	—	—	8	4	8	4	1	1 (M.O.)	
Winneba	1	1	7	1	7	1	28	22+6 cots	32	28+6 cots	1	1 (M.O.)	
Total	2	5	9	1	10	1	80+1 cot	53+7 cots	97+2 cots	67+13 cots	7	7	

APPENDIX I—*contd.*

Government Hospital Bed Accommodation and Dispensaries, Gold Coast Colony, Ashanti, Northern Territories and British Sphere of Togoland, Medical Branch.

Colony. Western Province.	Hospital.		European.				African.				Dispensaries.	Medical staff (Medical officers and women Medical officers).	Remarks.
	European.	African.	Total Beds at present.		Number of Beds possible.		Total Beds at present.		Number of Beds possible.				
			M.	F.	M.	F.	M.	F.	M.	F.			
Axim	1	1	6	—	6	—	12	4	12	4	1	1 (M.O.)	
Chama	—	—	—	—	—	—	—	—	—	—	—	1 Red Cross sister	Red Cross welfare centre.
Sekondi	—	1	—	—	—	—	46+2 cots	9+2 cots	46+2 cots	9+2 cots	1	2 (M.O.s.)	
Sekondi	—	—	—	—	—	—	—	—	—	—	1	1 Red Cross sister	Red Cross welfare centre.
Takoradi	1	—	19	4	19	4	—	—	—	—	1	1 (M.O.)	
Tarkwa	—	1	—	—	—		7	4	7	4	—	1 (M.O.)	
Wiawso	—	1	—	—	—	—	7	1	11	4	1	1 (M.O.)	Visited occasionally by M.O.
Total	2	4	25	4	25	4	72+2 cots	18+2 cots	76+2 cots	21+2 cots	5	8	

APPENDIX I—*contd.*

GOVERNMENT HOSPITAL BED ACCOMMODATION AND DISPENSARIES, GOLD COAST COLONY, ASHANTI, NORTHERN TERRITORIES AND BRITISH SPHERE OF TOGOLAND, MEDICAL BRANCH.

ASHANTI.	HOSPITAL.		EUROPEAN.				AFRICAN.				Dispensaries.	Medical staff (Medical officers and women Medical officers).	REMARKS.
	European.	African.	Total Beds. at present.		Number of Beds possible.		Total Beds at present.		Number of Beds possible.				
			M.	F.	M.	F.	M.	F.	M.	F.			
Bekwai	—	1	—	—	—	—	6	4	6	4	1	1 (M.O.)	
Kumasi	1	1	10	1	10	1	111	26	111	26+6 cots	1	3 (M.O.s.)	
Kumasi	—	1	—	—	—	—	—	10+20 cots	—	10+18 cots	1	1 (W.M.O.)	Welfare centre.
Sunyani	—	1	—	—	—	—	16	4	16	4	1	1 (M.O.)	
Total	1	4	10	1	10	1	133	44+20 cots	133	44+24 cots	4	6	

APPENDIX I—*contd.*

GOVERNMENT HOSPITAL BED ACCOMMODATION AND DISPENSARIES, GOLD COAST COLONY, ASHANTI, NORTHERN TERRITORIES AND BRITISH SPHERE OF TOGOLAND, MEDICAL BRANCH.

NORTHERN TERRITORIES.	HOSPITAL.		EUROPEAN.				AFRICAN.				Dispen-saries.	Medical staff (Medical officers and women Medical officers).	REMARKS.
	Euro-pean.	Afri-can.	Total Beds at present.		Number of Beds possible.		Total Beds at present.		Number of Beds possible.				
			M.	F.	M.	F	M.	F.	M.	F.			
Bawku	—	1	—	—	—	—	6	—	9	—	1	1 (M.O.)	
Lawra	—	1	—	—	—	—	12	4	12	4	1	1 (M.O.)	
Navrongo	—	1	—	—	—	—	9	2	14	4	1	1 (M.O.)	
Salaga	—	1	—	—	—	—	8	2	8	3	1	1 (M.O.)	
Tamale	1	1	4	2	4	2	37	8+3 cots	37	8+3 cots	1	2 (M.O.s.)	
Wa	—	1	—	—	—	—	12	5	13	5	1	1 (M.O.)	
Zuarungu	—	—	—	—	—	—	—	—	—	—	1	—	Visiting from Navrongo.
Gambaga	—	—	—	—	—	—	—	—	—	—	1	—	Visiting from Bawku.
Total	1	6	4	2	4	2	84	21+3 cots	93	24+3 cots	8	7	

APPENDIX I—*contd.*

GOVERNMENT HOSPITAL BED ACCOMMODATION AND DISPENSARIES, GOLD COAST COLONY, ASHANTI, NORTHERN TERRITORIES AND BRITISH SPHERE OF TOGOLAND, MEDICAL BRANCH.

BRITISH SPHERE OF TOGOLAND.	HOSPITAL.		EUROPEAN.				AFRICAN.				Dispensaries.	Medical staff (Medical officers and women Medical officers).	REMARKS.
	European.	African.	Total Beds at present.		Number of Beds possible.		Total Beds at present.		Number of Beds possible.				
			M.	F.	M.	F.	M.	F.	M.	F.			
Ho	—	1	—	—	—	—	13	4	14	5	1	1 (M.O.)	
Kete Krachi	—	—	—	—	—	—	—	—	—	—	1	1 (M.O.)	Visited occasionally by M.O.
Yendi	—	1	—	—	—	—	9	10	10	10	1	1 (M.O.)	
Total	—	2	—	—	—	—	22	14	24	15	3	3	
Grand Total	7	32	63	11	64	11	657+10 cots	277+96 cots	689+11 cots	293+98 cots	40	48	

*The number of beds possible is a variable figure. It can in case of outbreak be largely increased.

APPENDIX I—*contd.*

GOVERNMENT HOSPITAL BED ACCOMMODATION AND DISPENSARIES, GOLD COAST COLONY, ASHANTI, NORTHERN TERRITORIES AND BRITISH SPHERE OF TOGOLAND, HEALTH BRANCH.

COLONY. CONTAGIOUS DISEASES HOSPITAL.	HOSPITAL.		EUROPEAN.				AFRICAN.				Dispensaries.	Medical staff (Medical officers and women Medical officers).	REMARKS.
	Euro-pean.	Afri-can.	Total Beds at present.		Number of Beds possible.		Total Beds at present.		Number of Beds possible.				
			M.	F.	M.	F.	M.	F.	M.	F.			
Accra (Labadi)	1	1	—	—	4	—	33	23	59	82	—	1 (M.O.H.)	Visiting.
Ada	—	1	—	—	—	—	—	—	4	2	—	1 (M.O.H.)	Visiting.
Cape Coast	—	1	—	—	—	—	5	4	13	13	—	1 (M.O.H.)	Visiting.
Keta	—	1	—	—	—	—	—	—	4	2	—	1 (M.O.H.)	Visiting.
Koforidua	—	—	—	—	—	—	—	—	—	—	—	—	
Kumasi	—	1	—	—	—	—	18	6	60	8	—	1 (M.O.H.)	Visiting.
Saltpond	—	1	—	—	—	—	1	1	2	2	—	1 (M.O.H.)	Visiting.
Sekondi	—	1	—	—	—	—	1	—	24	24	—	1 (M.O.H.)	Visiting.
Tarkwa	—	1	—	—	—	—	—	—	6	—	—	1 (M.O.H.)	Visiting.
Winneba	—	1	—	—	—	—	—	—	2	2	—	1 (M.O.H.)	Visiting.
Total	1	9	—	—	4	—	58	34	174	135	—	9	

APPENDIX II.

Leper Settlement, Ho, 1934.

1.—STAFF.

(*a*) *Medical :*

The Medical Officer, Ho
One African Superintendent
One Head Dresser
Three Assistant Dressers.

The head dresser and the assistant dressers are lepers who have been trained at the Settlement for this work.

(*b*) *Health :*

Three scavengers are employed.

2.—BUILDINGS AND IMPROVEMENTS.

A good bush house, size 26 feet long by 18 feet wide, with thatch roof and cement floor has been built for the Syrian leper.

The houses in the settlement have been rethatched and the " Ago " beam replaced where necessary during the year.

The walls between the stores and the dressing shed which fell down have been repaired with stones and cement.

3.—WORK DONE.

The work of the settlement has been continuing on former lines. Lepers received treatment during the year ; drugs used were moogrol, hydnocarpus oil and alepol.

Table showing results of treatment :—

Arrested	73
Improved	68
Stationary	141
Worse	68
Died	6

The inmates of the settlement come from Togoland and the Trans- Volta districts.

4.—EMPLOYMENT.

The able-bodied lepers make their own farms, supporting themselves in this way : shoe-making, carpentry, pottery and mat-making are still being carried on in the settlement.

5.—MAINTENANCE.

All the lepers are subsisted at the rate of 3d. per diem with the exception of 24 lepers who are totally incapacitated. These receive $4\frac{1}{2}$d. per diem.

6.—EDUCATION.

The Ewe Presbyterian and the Roman Catholic schools are still doing good work. There are five leper school masters who give daily lessons to the 20 leper children. There are also Ewe Presbyterian and Roman Catholic Churches in the settlement. Weekly services are held.

7.—SANITATION.

The sanitary condition of the settlement is good. Three scavengers are employed. Three pan-latrines are in use and the night-soil from these is emptied into the fly-proof disposal-pits. Four incinerators are in use to burn the refuse at the settlement.

8.—WATER SUPPLY.

The water supply is scanty and failed entirely during the months of December January and February. During this time lepers had to fetch their water from the town supply. It is hoped to extend the Ho pipe-line to the settlement when funds are available.

9.—DATA, 1934.

Remaining in settlement 1st January, 1934 ...	320
Admitted from 1st January, 1934	91
Left	52
Discharged	2
Died	6
Remaining in settlement 31st December, 1934 ...	351

H. C. ARMSTRONG,

Medical Officer.

APPENDIX III.

Annual Report on the Maternity Hospital, Accra, 1934.

Staff :—

One Medical Officer

Two Nursing Sisters

Three Staff Midwives. Appointment renewed each year

Five Second Division Nurses undergoing training as midwives

Three Nurses-in-Training

Six Midwives-in-Training

Sixteen unpaid pupil probationers were taken on during the year, five left as being unsuitable for training.

Work done :—

In-patient admissions	1,481
Attendances at ante-natal and post-natal clinics	13,907
Deliveries	623

Fees collected	£1,132 11s. 8d.
Midwives who passed the final examination	5
Pupils remaining in training at the end of the year	25

Buildings :

The Isolation block was opened in February. This has placed the nursing of infectious cases on a much more satisfactory basis and provides more satisfactory training for pupils.

Ante-natal block.—Owing to the generosity of the Red Cross the foundation stone of a new 12-bedded ante-natal block was laid by the Acting Governor in October. It should be ready for use early in the new year and will relieve much of the congestion of the main block.

Hostel for pupil-midwives.—Plans for a hostel for pupil-midwives have been approved. With more satisfactory living conditions it will be easier to get pupils from the more distant parts of the Colony.

It is expected that with better housing than is at present available and with regular hours as regards meals and sleep the pupils will concentrate more interest in their work and the general standard of efficiency will be raised.

District work.—Ante-natal work in the town improves slowly. This is partly due to the small number of health visitors available. Partly it is due to the fact that so many patients are impossible to trace as they cannot give an address when they first attend. Health visitors and midwives do what they can but the difficulty will only be overcome by patient education of the public.

Qualified Midwives.—At the end of the year there were five qualified midwives practising in Accra, Christiansborg and Labadi.

It has not yet been possible to institute a regular system of supervision and inspection, but with the increasing number of midwives in practice the matter of inspection becomes more urgent, especially if the good record of the past year is to be maintained.

Deliveries on district by qualified midwives who attend regularly at the ante-natal clinics to see and to book cases—507. Corresponding figures for 1933–34 = 303. It is gratifying that the qualified midwives are doing so much work and that it shows every sign of steadily increasing.

In Accra and district the number of deliveries by trained midwives increased 66 per cent as compared with 1933–34.

The morbidity rate was very low, four cases in all.

One patient died. She had a severe attack of dysentery and refused to go to hospital.

Of the remaining three cases one had dysentery and one pleurisy.

These results were very satisfactory and fully justify the policy of training native women for district work.

Living as they do among the people they are called in at the beginning of labour and have the sole charge of the cases from start to finish.

The returns are particularly striking when compared with the hospital figures.

The number delivered in hospital is slightly higher.

Hospital deliveries	623	*District*	507
Morbid cases	123		4
Deaths	30		1

The hospital has to serve a large area and all the complicated cases tend to gather there, and the disastrous effects of unskilled interference and of native medicine are seen in their full force in the hospital statistics.

Until knowledge has spread, and trained help is available in the different villages, hospital figures are not likely to show much, if any, improvement.

Treatment of Patients :—

Attendances at ante-natal and post-natal clinics	13,907
In-patient admissions	1,481
Deliveries	623
Fees	£1,132 11s. 8d.

Wassermann reaction :—

Total number examined	1,341
Double plus reaction	290
Single plus reaction	133
Negative	918

Malaria :—

Total cases examined	1,500
Total cases showing malaria parasites	390
Total cases negative to malaria	1,110

Analysis of cases :—

In-patient admissions	1,481
Admitted for ante-natal treatment	635
Labour cases	623
Abortions	90
Post-natal complications (mothers and infants)	82
Other cases	51
Total deliveries	623
Living infants	572

Toxaemias :—

There were 41 cases of albuminuria exclusive of those attributable to malaria, schistosomiases and cystitis.

Four cases of chronic nephritis are included. In three of these surgical induction was performed and in the fourth case spontaneous abortion took place.

Two of the infants died, and the third was still-born.

There were five cases of eclampsia. Three recovered and two died. Of the two fatal cases one was undelivered and the other suffered from tuberculosis as well.

The remaining cases of albuminuria all responded satisfactorily to conservative treatment in hospital.

Seven other cases were classed as toxaemias and recovered with conservative treatment.

Four cases of vomiting.

One vomiting, acetonuria and malaria.

One vomiting, acetonuria, malaria and amoebic dysentery.

One acetonuria.

Anaemia :—

Sixteen cases were admitted to hospital for anaemia.

Seven showed the high colour index associated with tropical megalocytic anaemia. All responded satisfactorily to treatment.

Two severe cases of pyelitis were admitted. One recovered after spontaneous abortion. One recovered and continued her pregnancy.

Abortions :—

The increase in the number admitted, 90 as compared with 46, is due to the opening of the isolation block. Formerly only a few of the cases of abortion could be admitted owing to lack of accommodation.

Of other emergencies it is to be noted with regret that 13 cases of rupture of the uterus were admitted and that all were fatal. These cases all came from a distance but if brought to hospital within reasonable time most could have been saved.

Presentations.—659 including 34 pairs of twins and one lot of triplets.

Vertex.

V.LOA	354
V.ROA	184
V.ROP	14
V.LOP	7
POP	13
Vertex unclassified	15

Breech.

LSA	15
RSA	7
Breech unclassified	36

Face.

RMP	3
RMA	1
LMA	1
Transverse	5
Compound	2
Brow	2

Operations :—

Surgical inductions of labour	45
Forceps delivery	50
(*a*) Normal vertex presentation	34
(*b*) After manual rotation of occiput	16

Manual extraction of child in abnormal presentation:

(*a*) Breech with extended legs	3
Internal version and manual extraction	7
Destructive operations on the foetus	12
Craniotomy	7
Embryotomy	2

Manual extraction of child in abnormal presentation—contd.

Decapitation	3
Caesarian section	7
Other manipulations	4
Flexion of brow to vertex	1
Application of Willett's Forceps for placenta previa	1
Pulling down half-breech for placenta previa	1
Reposition of prolapsed cord	1

Abdominal section.

(*a*) Laparotomy and drainage for peritonitis	3
(*b*) Removal of ectopic gestation	1

Uterine exploratory operations:

(*a*) Dilatation and curettage for sterility	10
(*b*) Exploration and removal of retained products of abortion	33
(*c*) Manual removal of placenta	12

Reparative operations on the Mother.

Perineal repair	30
Cervical	1
Episiotomy	1
Abscesses incised	2
Excision of breast	1
Removal of extra thumb	1

Maternal Mortality :—

Maternal deaths	30

Analysis of cases.

Lobar pneumonia	1
Ectopic gestation	1
Puerperal haemorrhage	2
Puerperal sepsis	6
Eclampsia	2
Other toxaemias of pregnancy	4
Ruptured uterus	13
Obstetric shock	1

i.e., 2·3 per cent of total admissions
24 obstetric emergency cases admitted
6 cases attending ante-natal clinic.

Infant Deaths = 74.

Broncho-pneumonia	1
Congenital debility	24
Prematurity	30
Dystocia and intra-cranial haemorrhage	15
Haemorrhage of new born	1
Malformations	3

i.e., 11·2 per cent of total births in hospital.

Analysis of Still-births = 87.

Ante-partum haemorrhage	2
Anencephaly	2
Hydrocephalus	2
Prematurity	6
Dystocia	48
Prolapsed cord	3
Disease of mother	2
Unknown	22

Total births = 659.

Still-births 13·2 per cent of the total births in hospital.

Morbidity.—Number of cases 123.

Standard of morbidity.—Where the temperature reaches 100.4F. for 24 hours, or twice in 24 hours, during the first 7–8 days of the puerperium, not including the first 24 hours. All fatal cases are included.

Surgical induction was performed 45 times, four cases were morbid.

Of morbid cases, 20 were in normal deliveries in hospital. One of these had a B. pyocyaneus infection and recovered ; one died of puerperal fever and the other recovered. Of the remaining 47 cases of local sepsis, two were forceps deliveries in hospital cases ; the others had had outside interference before admission.

S. RUSSELL,

Woman Medical Officer,
Maternity Hospital.

APPENDIX IV.

The following case reports are of interest :—

1.—BLACKWATER FEVER TREATED WITH ATEBRIN INJECTIONS.

By Dr. V. E. Critien, Medical Officer.

J. A., female, age 4½ years.

Admitted 18th December, 1934.

The mother of the child stated that the child had suffered from recurring attacks of fever for some time. The present attack commenced with a rigor and the onset was sudden on the 14th December. There was constant vomiting and blood-coloured urine was first noticed on the 16th. On examination the principal signs and symptoms elicited were the following :—

> General appearance : eyes slightly jaundiced, sunken orbits, child definitely very ill. Pulse 166. Temperature 100·5, spleen enlarged, distinctly palpable and somewhat tender. Liver slightly enlarged. Urine—a dark blood-red colour.
>
> Blood slide : A few M.T. rings.

The patient was admitted and treatment with Atebrin and Plasmoquin instituted. Patient was unable to keep these down and an injection of Atebrin gr. ¾ was given at 4 p.m. A second injection was given on the 19th. Improvement was rapid, the urine began to clear on the 19th and was quite normal in appearance on the evening of the 21st. The vomiting stopped and the patient was able to retain Atebrin and Plasmoquin tabloids by the mouth on the 20th and made an uninterrupted recovery.

Temperature.—18th December, M.100·5°, E.102 ; 19th December, M.99·4°, E.99·4° ; 20th December, M.99·6°, E.98·6° ; 21st December, M.99, E.98·6° ; 22nd December, M.99·2°, E.99·4° ; 23rd December, M.98·2°.

2.—SNAKE BITE (CAUSUS RHOMBEATUS).

By Dr. V. E. Critien, Medical Officer.

I am reporting this case as I understand the efficacy of Fitzsimons' serum has been questioned in regard to the bite of the African night adder (*Causus Rhombeatus*).

J.T., prisoner, age 27.

Admitted 26th July, 1934 at 10 a.m.

History.—Bitten by a snake identified as a female night adder, at 9.30 a.m. whilst working with a clearing gang.

Examination.—Distinct fang marks on ankle, leg swollen almost up to knee.

Treatment was immediately instituted : one phial of serum was given intravenously in the arm, a second into a vein of the leg below tourniquet applied on admission, a third phial was given subcutaneously around the bite. 10 c.c. of serum was given intravenously daily for two days. The patient made an uninterrupted recovery and constitutional symptoms were completely absent.

The swelling of the leg took one week to settle down. Temperature went up to 102 on the third day and was down to normal by the sixth. On the eighth day the patient developed a swelling of the right parotid and was detained in hospital a further five days on account of this.

The case is of interest because it conclusively proves the curative effect of the serum when given a short time (in this case half an hour) after the bite.

The incipient swelling of the bitten leg up to nearly the knee in half an hour indicates that the snake had definitely injected its poison.

The absence of general symptoms, haemorrhages, etc., shows that the poison was counteracted as it entered the general circulation.

I have found it necessary in my experience to continue daily injections of serum for a few days in all cases of snake-bite; if this precaution is not taken patients are liable to develop delayed but alarming general symptoms.

3.—ADDISON'S DISEASE.

BY DR. E. M. FRANKLIN, SPECIALIST.

Male European, age 27.

Was in hospital for some days for the treatment of Taenia Saginata, for some time before that he had complained of muscular weakness and lassitude.

After evacuation of the worm he had a short rest in hospital and was discharged feeling much better and stronger. Ten days later he was readmitted to hospital in a state of collapse with a history of vomiting and gradually increasing weakness.

Examination did not reveal anything but slight dullness at the apices of his lungs. No cough. His tongue and gums were slightly pigmented. His blood examination was negative. The main feature of his disease was continuous vomiting uninfluenced by any drug and continued low blood-pressure which was not altered by the exhibition of Adrenalin or Ephedrin.

His condition gradually became worse, being unable to retain anything by the mouth, he was kept alive for a while on rectal glucose, he became mentally confused and gradually sank and died a month after his admission to hospital. Four days before he died, pus, albumen and casts began to appear in his urine and continued until he died.

The Pathologist's report is as follows :—

Skin dark, possibly pigmented at commissures of lips.

Several old scars on legs are deeply pigmented.

Rigor mortis + +.

Chest, heart slightly dilated.

Lungs dense adhesions and scarring at both apices, noddles with caseous centres.

Abdomen.—Liver—Dark flabby. Spleen—Enlarged, dark. Pancreas—Nothing abnormal. Kidneys—Nothing abnormal.

Suprarenals.—Both enlarged and hard, on section pale cream colour with caseous areas and fibrous surroundings.

Acid fast bacilli present in smear.

4.—ANGULAR PREGNANCY—A CLINICAL ENTITY.

BY DR. A. WALKER, MEDICAL OFFICER.

A primigravida, aged 18 years, was admitted to the African hospital, Kumasi, on the 11th of July, 1934, on account of violent, cramp-like pains in the lower abdomen, especially on the left side. There was marked tenderness over the uterus: the uterus was also hard on palpation. The patient had previously had two attacks of salpingitis.

The temperature did not rise much and in fact the patient was afebrile after rest and thorough evacuation of the bowels, but the pulse rate was increased, and the patient appeared very ill.

A provisional diagnosis of ectopic pregnancy or ovarian cyst with torsion of the pedicle was made, and, in view of the evidence of peritoneal irritation, immediate laparotomy was performed under a general anaesthetic. No blood or free fluid was found in the abdominal cavity. The ovaries were healthy and the tubes were somewhat congested.

The intestines and appendix were normal. Examination of the uterus, which contained no fibroids, showed a marked swelling in the left cornu and the diagnosis of angular pregnancy was established. The abdomen was closed. The patient aborted the next day. Subsequent progress was uneventful, and she was dismissed well on the 3rd August, 1934.

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